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BULLETIN

OF

THE UNIVERSITY OF TEXAS

No. 118

ISSUED SEMI-MONTHLY

Official Series, No. 34 February 15, 1909

ANNOUNCEMENT

OF THE

DEPARTMENT OF MEDICINE

GALVESTON

1908-1909

ENTERED AS SECOND-CLASS MAIL MATTER AT THE POSTOFFICE AT AUSTIN, TEXAS

Cultivated mind is the guardian genius of democracy. . . . It is the only dictator that freemen acknowledge and the only security that freemen desire.

President Mirabeau B. Lamar.

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no. 118
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CONTENTS

PAGE

DEPARTMENT OF MEDICINE—

Calendar 5
Regents 6
Faculties 7

SCHOOL OF MEDICINE—

Historical sketch 11
Buildings and equipment 11
Facilities for teaching 12
Museums 14
Hospital facilities 16
Requirements for admission 17
Time of entrance examinations 21
Advanced standing 23
Examinations and class standing 24
Requirements for graduation 25
Plan of instruction 25
Departments of instruction 28
Special lectures 45
Summary of hours to each subject 49
Library 50
University Hall 51
Scholarships and Fellowships 51
John Sealy Hospital 53
Roster 72
Text-books 77
Degrees and Honors 80
Hospital appointments 81
Associations 82
Expenses 83

SCHOOL OF PHARMACY—

Announcement 88
Requirements for admission 89
Examinations and class standing 91
Plan of instruction 91

PAGE

SCHOOL OF PHARMACY—continued.

Departments of instruction 92
Library 97
Scholarships 98
Roster 99
Text-books 101
Degrees and Honors 101
Associations 102
Expenses 102

SCHOOL OF NURSING—

Staff 105
General information 106
Announcement 107
Requirements for admission 108
Course of training and instruction 110
Text-books 112
Roster 113
Graduates in nursing 115
Notice 115

CATALOGUE OF STUDENTS IN THE DEPARTMENT OF MEDICINE 116

SUMMARY OF STUDENTS IN THE UNIVERSITY OF TEXAS 125

SUMMARY OF STUDENTS IN THE DEPARTMENT OF MEDICINE 126

ATTENDANCE BY YEARS 126

APPENDIX—

Admission requirements 127
Specimens of entrance examinations 142
Regulations governing affiliation of High Schools 167
List of affiliated schools 171

1909

January

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BOARD OF REGENTS

T. S. HENDERSON, Chairman.

G. W. BRACKENRIDGE.....San Antonio.
T. S. HENDERSON.....Cameron.
T. B. GREENWOOD.....Palestine.
N. W. FINLEY.....Dallas.
J. W. MCLAUGHLIN.....Austin.
HAMPSON GARY.....Tyler.
A. W. FLY.....Galveston.
A. W. TERRELL.....Austin.

JAMES B. CLARK,* Secretary, Austin.
E. J. MATHEWS, Acting Secretary, Austin.

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COMMITTEE ON BUILDINGS AND GROUNDS: McLaughlin, Chairman; Brackenridge, Fly.

COMMITTEE ON COMPLAINTS AND GRIEVANCES: Finley, Chairman; Greenwood, Gary.

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FINANCE COMMITTEE: Gary, Chairman; Greenwood, Terrell.

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LEGISLATIVE COMMITTEE: Terrell, Chairman; Finley, Henderson.

COMMITTEE ON MEDICAL DEPARTMENT: Fly, Chairman; Brackenridge, McLaughlin.

The Board of Regents meets in Austin on the third Tuesdays of January and October and on the day preceding Commencement Day, and in Galveston in May on the day preceding that on which the graduating exercises of the Medical Department are held.

*Died December 6, 1908.

DEPARTMENT OF MEDICINE

FACULTIES

SIDNEY EDWARD MEZES, PH. D., *President.*

SCHOOL OF MEDICINE

JOHN FANNIN YOUNG PAINE, *M. D.,*
Professor of Obstetrics and Gynecology.

EDWARD RANDALL, M. D.,
Professor of Materia Medica and Therapeutics.

WILLIAM KEILLER, L. R. C. P. and S. (ED.), F. R. C. S. (ED.),
Professor of Anatomy.

JAMES EDWIN THOMPSON, M. B., B. S. (LOND.), F. R. C. S. (ENG.),
Professor of Surgery.

SETH MABRY MORRIS, B. S., M. D.,
Professor of Ophthalmology and Otology.

WILLIAM SPENCER CARTER, M. D.,
Professor of Physiology and Hygiene and Dean of the Faculty.

MARVIN LEE GRAVES, A. M., M. D.,
Professor of Medicine.

JAMES JOSHUA TERRILL, M. D.,
Professor of Pathology.

ARTHUR EVERETT AUSTIN, A. M., M. D.,
Professor of Chemistry and Toxicology.

EDWARD RANDALL, M. D.,
Lecturer on Physical Diagnosis.

RAOUL RENE DANIEL CLINE, B. S., A. M., PH. G.,
Lecturer on Pharmacy.

M. CHARLOTTE SCHAEFER, M. D.,
Lecturer and Demonstrator of General Biology, Normal Histology, and General Embryology.

JAMES JOSHUA TERRILL, M. D.,
Lecturer on Climatology.

MARVIN LEE GRAVES, A. M., M. D.,
Lecturer on Nervous and Mental Diseases.

DAVID H. LAWRENCE, PH. G., M. D.,
Lecturer on Medical Jurisprudence.

HOWARD RUSH DUDGEON, M. D.,
Lecturer on Dermatology.

OSCAR H. PLANT, M. D.,
Lecturer on Dietetics and Demonstrator of Physiology and Pharmacodynamics.

JAMES GREENWOOD, JR., M. D.,
Lecturer on Pediatrics, Demonstrator of Clinical Medicine, and Instructor in Physical Diagnosis.

HOWARD RUSH DUDGEON, M. D.,
Demonstrator of Surgery.

H. O. SAPPINGTON, M. D.,
Demonstrator of Obstetrics and Gynecology.

HORACE TAYLOR AYNESWORTH, M. D.,
Demonstrator of Anatomy.

WALTER T. GARBADE, B. S., PH. G.,
Demonstrator of Chemistry.

HENRY HARTMAN, M. D.,
Demonstrator of Pathology and Bacteriology.

ALLEN GEORGE HEARD, M. D.,
Demonstrator of Clinical Medicine.

JOSEPH SCHOOLFIELD JONES, M. D.,
Demonstrator of Applied Anatomy.

L. O. DUDGEON, M. D.,
Assistant Demonstrator of Anatomy.

MAY AGNESS HOPKINS, B. S.,
Fellow in Histology.

MRS. WILBUR A. DUPREE,
Fellow in Pathology.

SCHOOL OF PHARMACY

EDWARD RANDALL, M. D.,
Professor of Materia Medica.

ARTHUR EVERETT AUSTIN, A. M., M. D.,
Professor of Chemistry and Toxicology.

RAOUL RENE DANIEL CLINE, B. S., A. M., PH. G.,
Professor of Pharmacy.

WALTER T. GARBADE, B. S., PH. G.,
Demonstrator of Chemistry.

JOHN C. BUCKNER, PH. G.,
Lecturer on Botany and Demonstrator of Pharmacy.

SCHOOL OF NURSING

MISS ETHEL D'A. CLAY,
Clinical Instructor in Nursing.

THOMAS H. NOLAN,
Provost of Medical Department and Secretary of Faculty.

MISS ADDIE HILL,
Librarian and Stenographer.

MRS. CALLIE G. SHAW,
Superintendent of University Hall.

CALENDAR FOR NINETEENTH ANNUAL SESSION 1909-1910

Entrance examinations will be held in the College Building, May 12, 13, and 14, and September 27, 28, and 29, 1909. Examinations for the removal of conditions and for advanced standing or exemptions will be held September 27, 28, and 29, 1909.

Registration days, September 28, 29, and 30, and October 1, 1909.

Opening Exercises.....Friday, October 1, 1909.
Thanksgiving Day.....Thursday, November 25, 1909.
First Intermediate Examinations begin.....December 15, 1909.

Christmas Holidays, December 23, 1909—January 2 inclusive, 1910.
Washington's Birthday.....February 22, 1910.
Texas Independence Day.....March 2, 1910.
Second Intermediate Examinations begin.....March 4, 1910.
San Jacinto Day.....April 21, 1910.
Final Examinations for Graduating Classes begin.....May 10, 1910.
Final Examinations for other Classes begin.....May 14, 1910.
Graduating Exercises.....May 31, 1910.

SCHOOL OF MEDICINE

ANNOUNCEMENT FOR THE NINETEENTH ANNUAL SESSION

HISTORICAL SKETCH

The first annual session of the Medical Department of the University of Texas began on October 1, 1891, and closed on April 22, 1892.

The eighteenth annual session opened on Thursday, October 1, 1908, and will close with appropriate exercises on Saturday, May 29, 1909.

The nineteenth annual session will begin on Friday, October 1, 1909, and will continue until May 31, 1910.

The sixth was the last session open to matriculates desiring to graduate under the requirement of three annual sessions for the completion of the course; four annual sessions of eight months each are required for graduation of all students matriculating for the existing course of instruction.*

BUILDINGS AND EQUIPMENT

The College Building occupies a block of ground situated on Avenue B, between Ninth and Tenth Streets; and upon the contiguous block, between Eighth and Ninth Streets, is situated the John Sealy Hospital, the property of the State, and a part of the Medical Department of the University. The Medical College Building was erected in 1890 at the cost of $86,000, exclusive of furnishings and equipment. It is a large and commodious building, modern in construction

*The authorities reserve the right of addition to, subtraction from, or modification of the announcements of this Catalogue as they shall deem for the best interests of the School and the students.

and imposing in architecture. It contains three large lecture theaters; anatomical, chemical, pharmaceutical, physiological, pathological, histological, and bacteriological laboratories; museums, library, and reading-rooms; faculty room, officers' rooms, and also rooms and laboratories occupied by the School of Pharmacy. The building is well lighted by side windows and sky-lights, is fitted throughout with gas and water, and is heated by steam.

For description of the John Sealy Hospital, see pp. 53-71.

A building, its cost approximating $40,000, known as "University Hall," was erected in 1897, through private beneFaction, and serves as a dormitory for women students in this Department. It provides all the comforts and privacy of a home for the women who matriculate in the Schools of Medicine and Pharmacy. On the first floor there is a large dining-room, and board as well as rooms may be had here by women students at a minimum cost.

FACILITIES FOR TEACHING

The various Departments of the Medical School were well equipped when it was organized in 1891. This equipment has been added to every session as the attendance has increased, and at present each laboratory is fully provided with all the apparatus and supplies required for teaching and for original investigation.

The laboratories of Chemistry and of Pharmacy occupy the first floor. The Chemical Laboratory has 275 working desks completely equipped with all the apparatus and re-agents necessary for individual work by the students in performing chemical experiments.

The Laboratory of Pharmacy is also fully equipped with apparatus and the facilities required for practical instruction, and has a large collection of drugs and pharmaceutical prep-

arations. While this laboratory is used chiefly by the School of Pharmacy, it is also used for giving practical instruction to the medical students in Materia Medica in the Freshman Year, and in Pharmacy in the Junior Year.

On the second floor is the Physiological Laboratory, consisting of a large room for practical instruction and of other rooms for preparation and research. This laboratory is thoroughly equipped with physiological apparatus for investigation and demonstration, and in addition has fifteen complete sets of apparatus for student exercises, made after the Harvard models, so that the students, working in sections of thirty or less, perform all but the most difficult experiments themselves. Demonstrations in Pharmaco-dynamics are also given in this Laboratory.

On the third floor, the laboratories of Pathology and Histology, each equipped with thirty microscopes and working tables, provide for individual work in the practical instruction in these subjects by each member of the class, which is divided into sections for this purpose.

The Laboratory of Bacteriology, also on the third floor, is provided with microscopes having oil-immersion lenses, and with all the apparatus necessary for practical exercises in bacteriology. Sections of thirty students each can be accommodated in this laboratory.

The Laboratory of Anatomy occupies the entire fourth floor, and is well lighted by ceiling and side lights (see "Museum of Anatomy," p. 15). The supply of anatomical material is adequate, and its preservation is ideal for purposes of dissection.

The Laboratory of Clinical Medicine is on the first floor of the Nurses' Home, adjacent to the Hospital. It is thoroughly equipped with apparatus and microscopes having oil-immersion lenses, for individual work in the study of Clinical

Pathology and of the cases in the medical wards by members of the Junior and Senior Classes.

In the basement of the College Building there is a machine shop in charge of a skilled mechanic. The shop is fitted up for all kinds of metal and wood work. Much of the apparatus in use in the different laboratories is either made or repaired here.

When the College Building was repaired after the storm of 1900, many alterations and improvements were made, especially in the Library and in the laboratories of Anatomy, Bacteriology, Physiology, and Pharmacy.

It is the policy of this school to attach little value to purely didactic teaching. Lectures, recitations, and demonstrations are regarded as necessary to enable the students to get the greatest benefit from the laboratory instruction, but the practical work in the laboratories and clinics is considered the most important part of the teaching. The students do not merely see others demonstrate how to do things. Each subject is taught in a practical manner, and whenever it is practicable the students themselves perform experiments, prepare and study specimens, examine patients, etc. The students are graded upon their attendance and practical work in the laboratories, clinics, ward classes, etc., and this record constitutes a part of the term grade in each subject.

The individual instruction and the positive knowledge acquired by the student's own personal observations are regarded as being of the utmost importance in giving the scientific training necessary for the work of the medical profession.

MUSEUMS

Instead of one general museum, there are special collections of typical specimens in connection with the different

laboratories, which make possible their use for teaching purposes.

Museum of Anatomy

The Museum of Anatomy is no mere collection of rare specimens, but is an integral part of the teaching equipment, being composed of specimens which have been prepared for their teaching value. The specimens are displayed and labeled with full descriptions on cards or in hand-books, so that the student can acquaint himself with their anatomy. The bones are painted, labeled, described, and fixed to tables conveniently arranged for study; ossification is illustrated by mounted specimens; sections and dissections of the eye, ear, brain, limbs, trunk, pelvis, head, etc., are displayed with full description; wax models of embryology and special dissections and models for illustrating applied surgical anatomy are also used.

The Department of Anatomy is constantly increasing the size and usefulness of this portion of the teaching equipment.

Museum of Pathology

The Museum of Pathology affords, as aids in teaching, a great variety of pathological specimens, especially those showing the gross lesions and their practical application to medicine and surgery. The collection consists of more than a thousand specimens, which have been brought together during a number of years, and is constantly being enlarged. Each specimen is labeled with the serial number of the Museum, the diagnosis, and the name of the donor. The history of each case, together with a description of the gross and microscopic findings, is recorded in a catalogue kept for that purpose. The more important specimens are of great value and easy of access for teaching purposes. Students and physicians

have access to the shelves at all times, and the specimens are continually used in class-room demonstration.

It is earnestly recommended that physicians throughout the State interest themselves in this museum. Any material illustrating interesting pathological conditions of organs or tumors, early fetuses, monsters, etc., may be put in a five per cent solution of formalin or strong alcohol and forwarded at the expense of the laboratory. Full credit will be given to the donor, and, if desired, a report of the microscopic findings will be promptly returned to him.

HOSPITAL FACILITIES

During the past year there have been treated in the wards of the John Sealy Hospital 1804 patients, exclusive of a large number of outdoor patients, who also furnished clinical material for the instruction of the class. The resources for illustration of medical ailments, surgical affections and accidents, and their management, are ample. Daily clinics are given throughout the entire session by members of the Faculty and by special lecturers. Much attention is devoted to bedside instruction, in which the students are required to accompany the teachers through the wards and practically acquire the methods of diagnosis and treatment. (For a full statement of the work done in the John Sealy Hospital, see pp. 53-71.)

During the past year there were 5031 new cases and 7458 old cases treated in the outdoor clinics or dispensaries. These outdoor clinics have been organized so that each fourth-year student receives the benefit of a period of this clinical work, in its several departments,—medicine, surgery, obstetrics and gynecology, and special diseases.

St. Mary's Infirmary, an excellent hospital under the care of the Sisters of the Incarnate Word, is situated at Market and Eighth Streets, only two blocks from the College.

REQUIREMENTS FOR ADMISSION

Men and women are admitted to the School of Medicine under equal conditions. At present the minimum requirement for admission by examination is the equivalent of a full high-school course.

Beginning with the session of 1910-1911, *applicants for admission to the School of Medicine of the University of Texas will be required to present the equivalent of five full courses in some recognized college of good standing. Five full courses represent the usual amount of work for one session in a college of good rank.*

While this minimum entrance requirement does not prescribe particular subjects, it is recommended to those who intend to study medicine, that the academic course preliminary to the study of medicine should include Physics, Chemistry, Biology, and Languages.

For the session of 1909-1910 the following are the requirements for admission to the School of Medicine:

1. Age and Character

Candidates must be at least seventeen years of age, and each candidate less than twenty-one years of age must present a written statement from a parent or guardian showing permission to matriculate.

Applicants must furnish evidence of good moral character and fitness for the profession of medicine. Testimonials signed by at least two reputable and responsible persons, preferably physicians, are required. Students coming from other colleges must present letters of honorable dismissal.

2. Vaccination

Candidates must present evidence of proper vaccination at a date sufficiently recent to insure protection against smallpox, or be vaccinated upon matriculation.

3. Legal Requirements

Under the Medical Practice Act of 1907, the regulations of the Texas State Board of Medical Examiners require that applicants for the license to practice medicine in Texas, in order that they may be eligible to the examinations for such license, shall have obtained from the Board, at the time of admission to a medical college, a certificate of satisfactory preliminary education.

As the University of Texas requires credit for fourteen high-school units, as the minimum entrance requirement, and the State Board of Medical Examiners issues its certificates upon credit for ten units, those who can satisfy the admission requirements of the University have no difficulty in securing the certificate of the Board of Examiners. The certificate of the State Board of Medical Examiners may be obtained from the Secretary of the Board, either before or soon after admission.

4. Scholarship

Candidates may be admitted (A) without examination or (B) on examination.

A. ADMISSION WITHOUT EXAMINATION

1. On Diploma

Graduates of the following institutions will be admitted to the Medical Department without examination: (a) Main University; (b) Agricultural and Mechanical College of Texas; (c) Texas State Normal Institutes; (d) College of Industrial Arts of Texas; (e) Affiliated High Schools; (f) Other Approved Colleges.

Graduates of affiliated schools are credited with the subjects which they have completed and in which the schools

are affiliated. Graduates of schools affiliated in the second and third groups of affiliated schools having credit for less than fourteen units, will be required to secure credit by examination in a sufficient number of elective units to make a total of fourteen.

In order to determine their credits, graduates of affiliated schools are required to present, at the time of matriculation, statements of the high-school work done by them. These statements are to be made by superintendents or principals on official blanks, which can be had of the Dean on request.

2 Without Diploma

Students from approved colleges and universities will be admitted on the presentation of proper certificates.

3. On Teachers' Certificates

Applicants holding first grade State Teachers' certificates granted since 1899 will receive credit for eight units: three in English, one and a half each in Algebra and Plane Geometry; one in Ancient History; one in Mediaeval and Modern History. Applicants holding permanent State teachers' certificates will receive credit for eleven units: three in English; one and a half each in Algebra and Plane Geometry; one in Ancient History; one in Mediaeval and Modern History; three without specification of subject.

B. ADMISSION ON EXAMINATION

For admission to the School of Medicine, fourteen units of credit are required, chosen from the list below, subject to the restriction that the following units must be included: three in English, two in History, one and a half in Algebra, and one and a half in Plane Geometry.

Subjects and Units that May be Presented for Admission

English, 3 or 4.

History:

- Ancient, 1.
- Mediaeval and Modern, 1.
- American, 1.
- English, 1.

Mathematics:

- Algebra, 1½.
- Plane Geometry, 1½.
- Solid Geometry, ½.
- Trigonometry, ½.

Foreign Languages:

- Latin, 3 or 4.
- Greek, 2 or 3.
- French, 2 or 3.
- German, 2 or 3.
- Spanish, 2 or 3.

Natural Sciences:

- Physiography, ½.
- Physiology, ½.
- Physics, 1 or 2.
- Chemistry, 1 or 2.
- Botany, 1 or 2.
- Zoology, 1.

Civics, ½.

Manual Training, 1 or 2.

Any or all scholarship requirements may be met by passing the admission examinations. To secure credit in any subject

the applicant must make a grade of 60 per cent or more. In grading examination papers in whatever subject, account will be taken of the applicant's use of English. Excellence in one subject will not make up for deficiency in another. Credits are not divisible in any subject.

For details respecting the character and extent of the preparation desired in the several subjects, see Appendix A.

The Faculty urges students who expect to study medicine to take Latin in the high-school course.

Time of Admission Examinations

1. May Examinations

Beginning on the third Monday in May, regular admission examinations will be held in the Main Building in the University at Austin, and at the Medical Department in Galveston, and at other central places making application for such privilege.

At affiliated schools which apply, the examinations will be held under the supervision of the Superintendent or the Principal of the school; at other central places, under the supervision of examiners appointed by the President. It is strongly urged that applicants desiring to enter the University in September take the May examinations. It is permitted to divide the subjects between the Spring and Fall examination periods, but credits obtained at the Spring examinations lapse unless the applicant passes the postponed examination the following fall. Credits obtained at the Fall examinations, if less than the total number required. are not valid later. The following regulations cover the May admission examinations:

1. Not later than the first Monday in May, the Registrar will send under seal admission examination questions to af-

filiated schools and other approved centers which have applied for them.

2. The examinations, after being duly advertised, will be held in such places as the examiners may appoint on the third Monday in May and two following days in the same order as the Fall examinations.

3. Each applicant before entering the examinations shall pay a fee of $3.00 to the examiner, to be retained by him.

4. The examiner shall open the sealed envelope containing the questions in the presence of the applicants.

5. The answers shall be written in ink, on legal-cap paper, on one side only; and the paper shall close with a pledge that no aid has been received or given.

6. The examination on any one subject shall not continue longer than three hours.

7. As soon as the series of examinations is completed, the examiner shall forward the papers to the Registrar with a certificate that the examination has been conducted fairly and in accordance with these rules.

2. September Examinations

Admission examinations will be held in September at the Main University in Austin, beginning September 20 and continuing through September 22, and at Galveston beginning September 27 and continuing through September 29.

3. October Examinations

Solely for the benefit of those who present to the Dean satisfactory reasons for having been absent from the September examinations, admission examinations will be held in the same order two weeks after the September examinations.

ADVANCED STANDING

Students who present satisfactory evidence that they have had instruction elsewhere, in any branches taught in the medical curriculum, equivalent in character and extent to that given in this school, will be admitted to an examination for exemption in such subjects. A grade of 75 per cent will be required in such examinations. In applying for exemption in any subject the candidate must present a letter from his former instructor stating the time spent and ground covered, and must also furnish a catalogue of the school or college from which he comes.

Graduates and students of the Main University at Austin who have satisfactorily completed the courses in Invertebrate Zoology, Histology, Embryology, Physics, and Chemistry, receive credit for these subjects in the Medical Department.

A student whose preliminary education has been equivalent to that required for admission to this school, and who has attended one or more sessions in a regular medical college will be admitted to advanced standing after passing satisfactory examinations (with a grade of 60 per cent or more) in all the studies that have been covered by the class which he desires to enter.

Examinations for exemptions and for advanced standing will be held September 28, 29, and 30, 1909.

A graduate of a regular medical school, seeking a diploma from this institution, will be admitted to the graduating class on passing examinations, with a grade of 60 per cent or more, in all the subjects taught in the first three sessions of the course in this school. (For the arrangement of the curriculum see pp. 25-27.)

A graduate of a regular medical school, not wishing a degree, will be admitted to an elective course in any branches of the curriculum upon satisfying the financial requirements.

EXAMINATION AND CLASS STANDING

Two intermediate examinations are held during the session, one during the week preceding the Christmas holiday, and the other during the second week in March. A final examination is also held in each subject upon the matter taught during the entire course. The average of the two intermediate examinations is known as the "term grade"; the grade attained in the final examination at the completion of each course is known as the "final grade"; the average of these two is the "general average."

If a student fails to take the intermediate and final examinations at the regular scheduled time, without having been excused by the Dean or by the professor in charge, he will be required to repeat the course in that subject.

A student's name may be dropped from the roll at any time during the session, when, in the opinion of the Faculty, he is not doing the work of the course in a satisfactory manner.

Each student, to pass satisfactorily, is required to make 60 per cent or more in the term and final grades, or, if the term grade be less than 60 per cent, to make 75 per cent in the final examination.

A student whose grades are unsatisfactory may be conditioned in not more than three subjects. Examinations for the removal of conditions will be held during the last week in September preceding the next session, and a grade of 75 per cent or more is required in such examinations. If a student fails to pass a satisfactory examination for the removal of a condition, he will be required to take the subject over, and will not be permitted to take advanced standing in any subject in conflict therewith on the roster.

A student is not permitted to carry a deficiency beyond the year succeeding that in which his deficiency occurs. Stu-

dents with such unsatisfied branches will be matriculated in the class in which the deficiencies occur.

A student conditioned in more than three branches will not be permitted to take examinations to remove such conditions, but will be required to repeat the year's course in its entirety.

Students who matriculate after the registration days (September 28, 29, 30, and October 1) will be required to pay a fine of $3.00.

No regular student will be matriculated after October 15 of any year, except by unanimous consent of the Faculty.

No examinations for the removal of deficiencies will be given after October 1 of any year. No student will be permitted to do class work until matriculated.

REQUIREMENTS FOR GRADUATION

Candidates for graduation must be at least twenty-one years of age, and must present evidence of good moral character; they must pass satisfactory examinations in all the subjects taught in the Senior Year; and, after having received notice of having successfully passed the final examinations of the last session, they must enter their names on the register of candidates for the degree of Doctor of Medicine.

Candidates for graduation must be present and take part in the graduating exercises, unless excused by the Dean.

PLAN OF INSTRUCTION

The work of the School is conducted according to the following curriculum:

First Year

Systematic lectures as follows:

Major Subjects: (1) Anatomy (bones, joints, arm, leg, and thorax); (2) Inorganic Chemistry, including qualitative

analysis; (3) Materia Medica; (4) Normal Histology; (5) Chemical Physiology (foodstuffs, foods, digestion, and the blood).

Minor Subjects: (1) General Biology, including those insects which convey disease; (2) Physics; (3) Embryology.

Practical laboratory work in (1) Anatomy; (2) Histology; (3) General Biology; (4) Chemistry; (5) Chemical Physiology; (6) Materia Medica; and (7) Embryology.

Second Year

Systematic instruction as follows:

Major Subjects: (1) Anatomy, covering such parts of the subject as are not given in the first year; (2) Physiology, covering those parts of this branch which are not given in the first year; (3) Organic and Medical Chemistry; (4) General Pathology; (5) Pharmacology.

Minor Subjects: (1) Physical Diagnosis; (2) Bacteriology; (3) Minor Surgery.

Practical laboratory work in (1) Anatomy; (2) Physiology; (3) Chemistry; (4) Pathological Histology; (5) Pharmaco-dynamics; (6) Bacteriology; (7) Physical Diagnosis.

Third Year

Systematic lectures in the following:

Major Subjects: (1) Practice of Medicine (see pp. 39-40); (2) Practice of Surgery (see p. 42; (3) Normal Obstetrics, including the mechanics and management of labor; (4) Therapeutics; (5) Special Pathology (see p. 36); (6) Surgical Anatomy.

Minor Subjects: (1) Hygiene; (2) Nervous Diseases; (3) Venereal Diseases; (4) Clinical Pathology; (5) Phar-

macy; (6) Dietetics; (7) Dermatology; (8) Diseases of the Eye; (9) Diseases of the Ear, Nose, and Throat.

Practical work in (1) Pathology; (2) Clinical Medicine; (3) Clinical Pathology; (4) Clinical Surgery; (5) Surgical Pathology; (6) Surgical and Medical Applied Anatomy; (7) Pharmacy.

Clinical lectures in General Surgery, Medicine, Obstetrics and Gynecology, Nervous and Mental Diseases, and Dermatology.

Fourth Year

Systematic lectures as follows:

Major Subjects: (1) Practice of Medicine (see p. 40); (2) Practice of Surgery (see pp. 42-43); (3) Gynecology; (4) Obstetrics; (5) Special Pathology; (6) Pediatrics.

Minor Subjects: (1) Nervous and Mental Diseases; (2) Dermatology; (3) Diseases of the Eye; (4) Diseases of the Ear, Nose, and Throat; (5) Medical Jurisprudence; (6) Climatology.

Practical work in (1) Operative Surgery; (2) Gross Morbid Anatomy and Autopsy-making; (3) Ward Classes, Outdoor Clinics, and Clinical Laboratory in Medicine; (4) Ward Classes and Outdoor Clinics in Surgery; (5) Dispensary in Gynecology; (6) Cases of Labor.

Clinical lectures in Medicine, Surgery, Gynecology, Dermatology, Pediatrics, Nervous and Mental Diseases, Diseases of the Eye, Diseases of the Ear, Nose, and Throat.

DEPARTMENTS OF INSTRUCTION

ANATOMY

WILLIAM KEILLER,* F. R. C. S. (ED.), *Professor of Anatomy.*

HORACE TAYLOR AYNESWORTH, M. D., *Demonstrator of Anatomy.*

JOSEPH SCHOOLFIELD JONES, M. D., *Demonstrator of Applied Anatomy.*

LAMARTINE OSBORNE DUDGEON, M. D., *Assistant Demonstrator of Anatomy.*

1. *Freshman Course.*

Ten hours weekly throughout the session.

a. Osteology. Ten hours weekly for six weeks in two periods, two weeks in October and four weeks in January. This course is given by laboratory demonstrations and by quizzes. An excellent museum of Osteology consisting of painted and labeled specimens, each carefully described in a special hand-book, affords great assistance to the student.

b. Arm, leg, and thorax. Ten hours weekly for twenty-two weeks. The class is divided into sections, and a demonstration of each region on the cadaver precedes the dissection. The regional method of dissection is followed, Cunningham's *Manual of Practical Anatomy* forming the student's guide.

2. *Sophomore Course.*

Ten hours weekly throughout the session.

a. Eye and Ear. Ten hours weekly for two weeks. These organs are carefully demonstrated by means of specimens, dissections, and models, and afterwards are dissected by the students. A complete series of dissections of the eye and ear, each described on a special card, makes these difficult subjects very clear, and gives great assistance in acquiring a practical knowledge of their anatomy.

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*Absent on leave. For the session of 1908-1909 the Department of Anatomy is in charge of Dr. H. T. Aynesworth, Senior Demonstrator of Anatomy.

b. Brain. Ten hours weekly for four weeks. The formalin method of preserving the cadaver has revolutionized the study of the brain. The students are furnished with brains in excellent preservation, and each dissection is preceded by a demonstration on a brain before the class in sections.

c. Head, neck, and abdomen. Ten hours weekly for twenty-two weeks. These parts are dissected by the class in sections, a demonstration of each region on the cadaver preceding the dissection.

3. Junior Course.

Six hours weekly throughout the session.

Applied anatomy is taught as a laboratory course, the student dissecting with a special guide-book furnished by the department and designed to present the subject from the standpoint of the clinician and operator. When time permits, fetal anatomy and surgical and medical embryology receive attention.

Stereopticon Lectures

It has been found that much benefit may be derived from the review of a subject by stereopticon lectures after the class has studied it by dissection. In this way the eye, ear, brain, and cranial nerves, are rapidly reviewed. This course of lectures will be steadily extended.

Anatomical Museum

The Anatomical Museum is every year becoming a more important feature in the teaching equipment of this Department. It contains a large and ever increasing number of wet and dry specimens and wax models. The specimens are not hidden away on the shelves where they are comparatively useless, but each is displayed in such a manner as to be convenient for study, is carefully labeled, and is described in a hand-book which the student is expected to consult. Many loose specimens also are constantly available for the purpose of study.

A Reference Library containing the more important of the recent text-books and atlases of Anatomy is open to students in the Anatomical Laboratory.

Dissecting material is abundant and thoroughly preserved, so that dissecting can be carried on with comfort in the hottest weather. The dissecting room is large, airy, well lighted from the roof and sides, always in perfect order, and free from offensive odors.

PHYSIOLOGY

WM. S. CARTER, M. D., *Professor of Physiology and Hygiene.*
OSCAR H. PLANT, M. D., *Demonstrator of Physiology and Pharmaco-dynamics.*

1. *Freshman Course. Chemical Physiology.*

Two lectures and five laboratory hours a week for one-half of the session.

This course is given during the second half of the first year. It includes general physiology, the chemistry of the organic food-stuffs, foods, digestion, and the blood. The laboratory exercises are closely correlated with the lectures, and are so arranged that each student performs all the experiments in examining the chemical properties of the different food-stuffs, the separation of the same, the changes which take place in them during digestion, the characteristics of each of the digestive juices, the action of the different digestive enzymes, and the conditions which influence the different phases of digestion. The different stages of digestion are studied in artificial digests prepared for the students by the demonstrator, and each individual student also makes such preparations himself.

2. *Sophomore Course. Animal Physiology.*

Three lectures and four laboratory hours each week throughout the entire session.

This course includes a thorough consideration of the lymph, absorption, circulation, respiration, metabolism, nutrition, animal

heat, secretions, excretions, nerve, muscle, the central nervous system, and the special senses.

The laboratory is well provided with all the apparatus and facilities for practical work in experimental physiology. For laboratory exercises the class is divided into sections, each section working in two-hour periods twice a week. Two students are assigned to a table having a complete equipment of apparatus after the Harvard models. Most of the experiments are performed by the students themselves under the personal supervision of the professor and demonstrator, thus insuring individual instruction. The more difficult and complicated experiments are shown by demonstration.

Each student is graded on the practical work in the laboratory, and is required to furnish notes, tabular statements, etc., on every exercise, and also to present tracings when the graphic method is used. The practical instruction by individual work in the laboratory not only enables the student to obtain a better understanding of physiology and to see its relation to other subjects, but it also trains him in experimental methods and better fits him for making individual observations in his medical studies.

The entire ground is covered as evenly as possible, without giving undue prominence to any one part; but those subjects which are especially important to the practical physician, such as the circulation, respiration, metabolism, nutrition, secretions, and excretions, receive most attention.

3. *Hygiene.*

Junior Year. Two lectures a week for one-half of the session.

This course is on the subject of Public Health, and includes a consideration of vital statistics, air, ventilation, heating, drinking water, its pollution and purification, public water supplies, house plumbing and sewerage systems, the disposal of sewage and garbage, soil, disinfection and disinfectants, and the prevention of communicable diseases. Practical instruction in Hygiene is included in the laboratory courses in Chemistry, Physiology, and Bacteriology.

CHEMISTRY

ARTHUR EVERETT AUSTIN, A. M., M. D., *Professor of Chemistry and Toxicology.*

WALTER T. GARBADE, B. S., PH. G., *Demonstrator of Chemistry.*

1. General Chemistry.

Freshman Year. Two lectures and four laboratory hours a week throughout the session.

This is a course in theoretical and descriptive chemistry, both inorganic and organic. The character of the elements, the laws governing their union, their sources, and the methods of isolation and preparation are considered. Special attention is given to compounds found in the body, substances of importance in materia medica, toxicology, and to substances which serve as reagents in the detection and isolation of biochemical products.

In the laboratory each student applies in a practical way the principles of chemistry in making qualitative analyses. Special attention is given to the separation and detection of chemical compounds, both inorganic and organic, which are of importance in pharmacy, physiology, toxicology, and hygiene.

2. Medical Physics.

Freshman Year. Two hours a week during the first third of the session.

This course is designed to acquaint the student with the underlying principles of elementary physics, particularly the phenomena of hydrostatics, heat, light, sound, magnetism, and electricity. Special attention is paid to the spectroscope, polariscope, microscope, and the instruments used daily by physicians.

Careful consideration is given to the principles of physical chemistry which are of importance in medicine, including such subjects as osmosis, freezing point, surface tension, electrical conductivity, etc.

The lectures are fully illustrated with demonstrations, for which a large and well-adapted collection of physical apparatus is provided.

3. Applied Chemistry.

Sophomore Year. Two lectures and four laboratory hours each week throughout the session.

This course comprises quantitative analysis as applied to clinical chemistry and hygiene. It includes the analysis of blood, gastric contents, urine, feces, and milk for diagnostic purposes; the analysis of drinking water and milk for hygienic purposes; of foods, vomitus, and urine for inorganic, organic, and alkaloidal poisons.

The chemical laboratory occupies the greater portion of the lower floor of the College Building, and contains 275 working tables, each table being supplied with a complete equipment of apparatus and reagents for individual work by each student. The Department of Chemistry is well equipped for the proper teaching of the subject, and the practical work is done by each student under the personal supervision of the Professor and the Demonstrator.

MATERIA MEDICA AND THERAPEUTICS

Edward Randall, M. D., *Professor of Materia Medica and Therapeutics.*

R. R. D. Cline, B. S., A. M., Ph. G., *Lecturer on Pharmacy in the School of Medicine.*

Oscar H. Plant, M. D., *Demonstrator of Pharmaco-dynamics.*

1. Materia Medica.

Freshman Year. Two lectures or recitations a week for nineteen weeks; one laboratory hour during nine weeks.

The instruction consists of lectures, recitations, and prescription writing. During the last third of the term, sections of the class are instructed in the Laboratory of Pharmacy. The time is devoted to practical work, with particular reference to the study and recognition of crude drugs, their chemical incompatibilities, and the manufacture of the commoner preparations.

2. Pharmacology.

Sophomore Year. Two lectures or recitations weekly throughout the session; six laboratory hours a week for eight weeks.

This course is devoted to the study of the physiological action of drugs. The individual remedies are considered separately, and their effects upon the normal animal organism are examined in detail. During the last third of the term demonstrations in experimental pharmaco-dynamics are given in the laboratory by Dr. Plant, Demonstrator of Pharmaco-dynamics. The effects of the most important of the different groups of drugs are shown by administering them to animals, which are always kept under the influence of anæsthetics during the experiments. In this way the students become thoroughly acquainted with the effects produced by drugs when given in therapeutic and in poisonous doses.

3. Therapeutics.

Junior Year. Two lectures a week during the entire session.

This course is devoted to the study of applied therapeutics. The general conditions under which each drug may be used in the treatment of disease are pointed out.

4. Practical Pharmacy.

Junior Year. Four laboratory hours a week for one-half of the session.

This course is conducted in the Laboratory of Pharmacy by Professor Cline. It includes a discussion of prescription writing, with special reference to pharmaceutical and therapeutical incompatibilities and the character and modes of preparation of remedies as far as these bear upon their use in Therapeutics. (For a full description of this course, see "Special Lectures on Pharmacy," p. 267.)

GENERAL BIOLOGY, NORMAL HISTOLOGY, AND GENERAL EMBRYOLOGY

M. CHARLOTTE SCHAEFER, M. D., *Lecturer and Demonstrator of General Biology, Normal Histology, and General Embryology.*

MAY AGNESS HOPKINS, B. S., *Fellow in Histology.*

1. *General Biology.*

Freshman Year. Two lectures and four laboratory hours weekly for ten weeks.

The didactic course includes a brief consideration of the vegetable and animal kingdom. Those organisms that are pathogenic or parasitic, or that act as primary or intermediate hosts for parasites infesting man, are considered at length.

In the laboratory each student learns the use and the care of the microscope. The student familiarizes himself with the various foreign objects which are likely to contaminate his mounts. Special stress is laid on the recognition of cells, their component parts, shapes, and relative sizes. The lectures are supplemented in the laboratory with demonstrations of the microscopic and macroscopic structure of the vegetable and animal organisms considered in this course.

All microscopic objects are drawn by the student.

2. *Normal Histology.*

Freshman Year. Two lectures and six laboratory hours weekly throughout the session.

The lecture course includes the microscopic study of all the tissues and organs of the body.

In the laboratory, microscopic sections of the different tissues and organs are mounted and studied. To impress the minute anatomy firmly upon the mind, each student is required to make drawings of his specimens.

3. *Embryology.*

Freshman Year. Two lectures and four laboratory hours weekly for eight weeks.

The systematic lectures include a brief description of the origin of the various tissues and the development of the different structures and organs of the body.

In the laboratory the various phases of the development of the chick are studied by microscopic sections.

PATHOLOGY AND BACTERIOLOGY

JAMES J. TERRILL, M. D., *Acting Professor of Pathology.*
HENRY HARTMAN, M. D., *Demonstrator of Pathology and Bacteriology.*
MRS. WILBUR A. DUPREE, *Fellow in Pathology.*

1. General Pathology.

Sophomore Year. Two lectures and four laboratory hours weekly throughout the session.

The subjects covered include the causes of disease, the nomenclature of disease, parasites, disorders of the circulation, disorders of metabolism (both general and local), inflammation, infectious granulomata, and tumors. In the laboratory each student examines and makes drawings of about two hundred typical specimens, both stained and unstained. The mark for the student's drawing-book is a part of his final grade for the year.

2. Bacteriology.

Sophomore Year. Two lectures or recitations and ten laboratory hours a week for nine weeks.

In this course the student learns to make the various culture media, to use the different forms of apparatus required for the study of bacteria, and to make practical examinations of air, water, milk, etc. The methods of sterilization and the chief pathogenic bacteria are studied, and, toward the end of the course, each sudent is assigned at least one unknown organism to determine and describe. In the didactic work, subjects are considered which can not well be included in laboratory hours.

3. Special Pathology. A.

Junior Year. Two hours weekly throughout the session.

Didactic lectures and recitations upon the special lesions which affect the different organs and systems. The subjects included are the special pathology of the circulatory, respiratory, digestive, and genito-urinary systems.

4. Special Pathology. B.

Junior Year. Four hours weekly for half the session.

For this course the Junior Class is divided into two sections, and each section, for half a year, studies typical material illustrating the subjects covered in Courses 3 and 5. Microscopic sections of the tissues removed in the operative surgical clinics are given to the members of the class for study in connection with the course in Surgical Pathology. About eighty specimens are studied and drawn by each student, and emphasis is continually laid upon symptoms and diagnosis in relation to the microscopic appearance of the tissues.

5. Special Pathology. C.

Senior Year. Two hours weekly throughout the session.

This is a continuation of Course 3, and consists of lectures and recitations, held twice weekly throughout the Senior Year. The subjects included are the lesions of the blood and blood-making organs, the muscles, bones and joints, skin, and nervous tissues.

6. Gross Morbid Anatomy.

Senior Year. Two hours weekly throughout the session.

This course naturally falls into two parts. The first includes the methods and criteria of diagnosis from naked-eye inspection of diseased organs, and is illustrated by material derived from autopsies and museum specimens. This work occupies about half the year. The remainder is devoted to complete cases, all the organs being studied both in the gross and microscopically, the different lesions correlated, and the clinical history reconstructed from the lesions. In this way all that the student has learned of normal and pathological anatomy and of symptoms is brought to a focus.

7. Post-mortem Examinations.

Methods of autopsy-making are demonstrated to the students of the Junior and Senior classes, and the Seniors are required to take part in practicing them by turns. They are also taught how to draw up a correct protocol, with the gross and microscopic findings.

OBSTETRICS AND GYNECOLOGY

J. F. Y. PAINE, M. D., *Professor of Obstetrics and Gynecology.*

H. O. SAPPINGTON, M. D., *Demonstrator of Obstetrics and Gynecology.*

1. Obstetrics.

Junior Year. Two lectures and one demonstration weekly during the session.

This course is on normal obstetrics. It includes the anatomy and physiology of the female organs of generation; the development of the fetus; the signs, symptoms, physiology, and pathology of pregnancy; the mechanism and conduct of natural labor; the management of the puerperium; and the care of the newborn infant.

2. Obstetrics.

Senior Year. Two lectures and one demonstration each week during the session.

This course is devoted to the pathology of labor; the mechanism and management of preternatural labors; obstetric surgery and the diseases of child-bed. Practical demonstrations are given on manikins, and cases of labor are assigned to members of the class.

3. Gynecology.

Senior Year. One lecture and four clinic hours each week during the session.

This course covers the field of gynecology by systematic lectures and clinical instruction. In the clinics, members of the class assist in the operations, and thus receive individual instruction in methods of diagnosis, operative technic, and treatment of diseases of the female reproductive organs.

4. Outdoor Clinics.

Senior Year. One hour daily for seven weeks.

The class is divided into small sections for attendance upon the outdoor clinics, and each member attends the gynecological

clinics during one-fourth of the session. Opportunity is afforded for examining patients, and practical instruction is given in the diagnosis and treatment of diseases of women.

PRACTICE OF MEDICINE

Marvin L. Graves, A. M., M. D., *Professor of Medicine.*
James Greenwood, Jr., M. D., *Demonstrator of Medicine and Instructor in Physical Diagnosis.*
Allen G. Heard, M. D., *Demonstrator of Clinical Medicine.*

The instruction in the Practice of Medicine extends throughout the third and fourth years, and is designed to equip the student with a thorough knowledge of the various diseases of Internal Medicine, including especially modern laboratory and clinical methods of diagnosis and the most practical and approved modes of treatment. Physical Diagnosis is taught by practical instruction in the second year (ese "Special Lectures," p. 267).

The following courses are given:

A. JUNIOR YEAR

1. Systematic Lectures.

Two hours each week throughout the entire session.

This course covers half the field of internal medicine, and includes the constitutional diseases, affections of the gastro-intestinal canal and its appendages, respiratory diseases, disorders of the renal system, cardiac and circulatory diseases, and diseases of the blood and of the ductless glands.

2. Ward Classes.

Two hours a week for each student during the entire session.

The class is divided into sections for bedside instruction so that each student receives personal instruction in the examination of patients.

3. Clinical Pathology.

Six hours a week for ten weeks.

The Laboratory of Clinical Medicine is well equipped with microscopes, apparatus, and chemical supplies, and an abundance of material is available from the wards and the out-patient department of the Hospital. Demonstrations of the blood, sputum, urine, feces, gastric contents, exudations, transudates, etc., are made. Individual examinations by each student familiarize him with the technic and the significance of exhibits in normal and in pathological conditions.

4. Clinical Lectures.

Two hours a week for one-half the session are devoted to the exhibition and discussion before the class of the clinical features of diseases from the medical wards of the Hospital.

B. SENIOR YEAR

5. Systematic Lectures.

Two hours a week during the session.

This course is devoted to those subjects of Internal Medicine not covered in the Junior Year. It embraces infectious diseases, animal parasitic diseases, intoxications, etc.

6. Clinical Lectures.

Two hours a week during the entire session.

Clinical lectures are given twice a week upon the cases which occur in the wards of the John Sealy Hospital. The extensive shipping interests of Galveston furnish exceptional advantages for clinical instruction in a wide range of diseases, and especially those which occur in subtropical countries.

7. Ward Classes.

Three hours a week throughout the session.

The class is divided into suitable sections, and the time is devoted to case-taking, bedside study, and clinical instruction. Students are assigned cases and required to write the history, examine the patient, make a diagnosis, and suggest treatment.

8. Laboratory of Clinical Medicine.

Two hours a week throughout the session are spent by members of the Senior Class in laboratory work upon the cases assigned to them in the medical wards and outdoor clinics.

The Laboratory of Clinical Medicine is utilized for the examination, by the students, of the secretions, excretions, blood, etc., of these cases. Proper supervision is exercised to insure accuracy and to point out the clinical significance of the findings. In this way the student realizes the full value of the clinical material and acquires a practical knowledge of the treatment of disease.

9. Outdoor Clinics.

Six hours weekly for seven weeks.

Under the direction of the Demonstrator of Medicine, sections of the Senior Class attend the outdoor clinics one hour daily. The students elicit the history of cases, examine patients, and suggest treatment. Personal and direct contact with a variety of medical diseases is thus obtained, and valuable experience is secured.

SURGERY

James E. Thompson, M. B., B. S., (Lond.), F. R. C. S., (Eng.), *Professor of Surgery.*

H. R. Dudgeon, M. D., *Demonstrator of Surgery.*

1. Bandaging and Minor Surgery.

Sophomore Year. One lecture weekly throughout the session.

This course is a very complete one, and aims at the thorough preparation of the student for the more advanced work of the third and fourth year. It consists of systematic lectures and clinical demonstrations in the hospital. The students are taught the essentials of asepsis and the preparation of dressings and ligatures. In addition, a short description of fractures, dislocations, and the uses of fixation apparatus is included in the course.

2. Systematic Lectures.

(*a*) Junior Year. Two hours a week during the entire session.

These lectures cover the following ground: the surgical aspects of inflammation in all its varieties; wounds; local and constitutional infections; gangrene; surgical aspects of tuberculosis and syphilis; fractures; dislocations; diseases of joints; diseases of bone; injuries and diseases of muscles and tendons; injuries and diseases of bursae; injuries and diseases of the heart and blood-vessels; aneurisms; injuries and diseases of the lymphatic system; injuries and diseases of nerves.

(*b*) Senior Year. Two hours a week during the entire session.

These lectures cover the following ground: surgical pathology and treatment of neoplasms; injuries and diseases of the head, brain, face, neck, spinal column, and spinal cord; diseases of the tongue and mouth, jaws, oesophagus, and pharynx; diseases of the stomach and intestines, rectum, and anus; diseases of the breast; diseases of the kidneys, ureter, bladder, prostate, urethra, and penis; diseases of the testicles, epididymis, vasa-deferentia, and vesiculæ seminales; hydrocele, hæmatocele; hernia in all situations; intestinal obstructions; diseases of the liver and gall bladder; diseases of the spleen; surgery of the chest and lungs.

3. Lectures and Laboratory Instruction in Surgical Pathology.

Junior Year. Two hours a week during the entire session.

This course is given jointly by the Departments of Surgery and Pathology, in the Laboratory of Pathology, in order to correlate the clinical aspect of surgical diseases with the pathologic condition. The study of the gross appearance of diseased tissues and tumors removed in the surgical clinics, and the discussion of similar specimens from the museum, is in charge of the Department of Surgery; the microscopic examination of such tissues is given by the Department of Pathology.

4. Ward Classes.

Junior Year. Four hours a week during one-half of the session.

Here the student is instructed in bandaging and surgical dressings; in the methods of examining cases and taking surgical histories; and in following the course of cases after operation.

5. Operative Clinics.

(*a*) Junior Year (in sections). Six hours a week during two-thirds of the session.

(*b*) Senior Year. Six hours a week during the whole session.

These clinics are held in the John Sealy Hospital every Monday, Wednesday, and Friday, from 9 a. m. to 11 a. m. Fourth-year students are invited, in rotation, to assist the surgical staff, in order that they may acquire a practical knowledge of the methods in use.

6. Venereal Diseases.

Junior Year. One hour weekly during the entire session.

This course, consisting of lectures and clinical demonstrations, aims to be as practical as possible.

7. Operative Surgery on the Cadaver.

Senior Year. Two hours weekly during the entire session.

This course consists of lectures and demonstrations on the cadaver. Each student, in turn, performs the operations previously described by the teacher. The course is very complete, and covers as far as possible, the whole ground of operative surgery. When necessary the class is divided into sections, in order that each individual student may acquire as much experience as possible.

It is the aim of this course to treat operative surgery from a purely anatomical point of view, and the anatomy of each surgical region is thoroughly taught.

8. Out-patient Department.

Senior Year. Sections. Six hours weekly for seven weeks.

Surgical teaching under the care of the Demonstrator of Sur-

gery is carried on every day except Sunday from 12 to 1 p. m. In this department the students come into close contact with the cases, and are allowed to conduct the treatment as far as advisable.

OPHTHALMOLOGY AND OTOLOGY

SETH MABRY MORRIS, B. S., M. D., *Professor of Ophthalmology, Otology, Rhinology, and Laryngology.*

1. Ophthalmology.

Senior Year. One lecture and two clinics weekly throughout the session.

The lectures embrace the following topics: anatomy and physiology of the eye, external diseases, fundus lesions and their relationship to general diseases. The students are given practical instruction in the use of the ophthalmoscope, in specially constructed dark rooms, and have every opportunity of acquiring a thorough working knowledge of this instrument.

Demonstrations are given of the methods of testing muscular balance, refraction, the practical application of which is demonstrated in the clinics, and interesting operations are performed before the class.

2. Otology, Rhinology, and Laryngology.

Senior Year. One lecture and two clinics weekly throughout the session.

The lectures are devoted to the special anatomy and the physiology of the ear, nose, and throat; the methods of examining these parts; and the different diseases to which they are subject.

In the out-patient department, the students have opportunity of acquiring a thorough knowledge of the normal appearance of the parts, and are able to follow the course and treatment of diseased conditions. They receive personal instruction in handling the various instruments used for examination and treatment. Operations are performed before the class.

SPECIAL LECTURES

PHYSICAL DIAGNOSIS

Edward Randall, M. D., *Lecturer on Physical Diagnosis.*
James Greenwood, Jr., M. D., *Instructor in Physical Diagnosis.*

Sophomore Year. Four hours weekly for nine weeks.

The course in Physical Diagnosis grounds the student in the normal physical signs of the human body. The alterations in these signs in diseased states are also explained and demonstrated. Each student is thus prepared for the clinical studies in the third and fourth years of the curriculum.

The teaching in physical diagnosis is thoroughly practical, and for this purpose the class is divided into small sections, so that each student has the advantage of individual instruction. A brief explanatory talk is given at the beginning of each exercise by the Lecturer, and the balance of the time is devoted to the examination of patients in the hospital by the students under the direction of the Lecturer and the Instructor.

PHARMACY

R. R. D. Cline, B. S., A. M., Ph. G., *Lecturer on Pharmacy in the School of Medicine.*

Junior Year. Sections. Four hours weekly for one-half of the session.

This course is given by practical exercises in the Laboratory of Pharmacy; and in order that each individual may receive personal instruction and make all the preparations, the class is divided into sections.

The students make those pharmaceutical preparations which are commonly used in the practice of medicine. They are taught how to purify drugs; to combine them without making them unsightly and unpalatable; how to remove substances which cause irritation and nausea, retard absorption, or impart disagreeable odors. The deterioration of drugs is also carefully considered. In handling the pharmaceuticals and chemicals the students become familiar with the various properties of drugs, their in-

compatibilities, their solubility in different menstrua, and the best methods of administering them.

The following preparations are made during the course: medicated waters, liquors, elixirs, syrups, spirits, tinctures, pills, tablets, suppositories, collodions, and ointments.

The latter part of the course is devoted to reading and criticising actual prescriptions. Students are required to write prescriptions for hypothetical conditions, special attention being directed to doses, incompatibilities, and the best way of giving the more important drugs in common use. The prescriptions are not only discussed from these standpoints, but it is pointed out how they may be made more palatable and less irritating, and how the unpleasant effects of the drugs may be avoided.

DIETETICS

OSCAR H. PLANT, M. D., *Lecturer on Dietetics.*

Junior Year. Two lectures a week for thirteen weeks.

This course comprises the composition, preparation, digestibility, and nutritional value of foods; also the diets suitable for different diseases.

The following foods are considered in detail with special reference to their use in health and disease: milk and milk products; eggs; meats and meat derivatives; fish and shell fish; cereals, with special reference to bread and dextrinized foods; leguminous vegetables; roots and tubers; green vegetables; fruits; spices and condiments; inorganic salts; drinking and mineral waters; tea, coffee, cocoa, and alcohol.

The second part of the course is devoted to the consideration of a suitable diet in those diseases in which the diet plays an important part in the treatment, *e. g.*, acute infections, tuberculosis, digestive diseases, renal diseases, malnutrition, obesity, diabetes, gout, and rheumatism.

MENTAL AND NERVOUS DISEASES

MARVIN L. GRAVES, A. M., M. D., *Lecturer on Nervous and Mental Diseases.*

Junior and Senior Years. One lecture and one clinic weekly throughout the session.

The more important and practical phases of the subjects are covered in didactic and clinical lectures. Illustrative cases are presented, examined, and discussed. The organic and functional psychoses and all the ordinary organic and functional diseases of the nervous system are treated. The practical application of electricity for diagnosis and treatment is taught. Students are instructed in morbid sensory and motor manifestations, the disordered reflexes, the disturbances of the special senses, speech, etc. The wards and out-patient department of the John Sealy Hospital and other sources afford an abundant supply of clinical material for these purposes.

MEDICAL JURISPRUDENCE

David H. Lawrence, Ph. G., M. D., *Lecturer on Medical Jurisprudence.*

Senior Year. Two lectures a week for nineteen weeks.

This course attempts to cover the subject of legal medicine as follows: the physician's liability for malpractice; relation of physician to patient; medico-legal inspection; violent death; rape; criminal abortion; infanticide; life insurance; malingering; death from the different poisons; corpus delicti; examination of blood stains; hypnotism; and insanity.

It is incumbent upon every physician to have some knowledge of the subject of legal medicine, as every physician, at some time during his professional career, is called upon to give testimony before the courts, and it behooves every young practitioner to appear in court when called upon. He should know, therefore, what the commonwealth expects and has a right to demand of him as a physician, and he should also know his own rights as a medical expert.

DISEASES OF CHILDREN

James Greenwood, Jr., M. D., *Lecturer on Diseases of Children.*

Senior Year. One lecture and one clinic each week during the entire session.

These lectures are devoted to the consideration of the diseases

incident or peculiar to infancy and childhood. Some of the lectures are didactic, as demanded by a systematic discussion of the anatomy, physiology, pathology, and hygiene of this period of life; but the teaching is chiefly clinical, and is illustrated by cases drawn from the wards and the outdoor clinics of the John Sealy Hospital. Special attention is given to the subject of infant-feeding in health and in disease.

DERMATOLOGY

H. R. DUDGEON, M. D., *Lecturer on Dermatology.*

Senior Year. One lecture each week during the entire session; six hours weekly for seven weeks in outdoor clinic.

The importance to the student of obtaining a thorough knowledge of skin diseases can hardly be overestimated. The frequency with which they are encountered in general practice, and the intimate relations they sustain to diseases of other organs, make the study both important and interesting. Special attention is given to the common diseases of the skin and to the pathology of the elementary skin lesions. When practicable the lectures are clinical, and when cases are not available, dermochromes are used to illustrate the different forms of disease.

MEDICAL CLIMATOLOGY

JAMES J. TERRILL, M. D., *Lecturer on Climatology.*

Senior Year. Two lectures a week for one-third of the session.

These lectures are given to the Senior students. They include a discussion of the instruments and methods used for determining weather conditions, atmosphere, temperature, winds, and moisture; physiological effects of weather elements and conditions; the use of the various elements of climate in the prophylaxis and treatment of disease. There is also included a description from a therapeutic standpoint of the various health resorts and mineral springs, especially those of Texas.

SUMMARY OF HOURS DEVOTED TO EACH SUBJECT

	First Year.		Second Year.		Third Year.				Fourth Year.				Total.				Total for Course.
	Lectures and Recitations.	Laboratory.	Lectures and Recitations.	Laboratory.	Lectures and Recitations.	Laboratory.	Clinics.	Ward Classes.	Lectures and Recitations.	Laboratory.	Clinics.	Ward Classes and Disp'ns'y	Lectures and Recitations.	Laboratory.	Clinics.	Ward Classes and Dispensaries.	
Anatomy		280		280										728			728
Surgical Anatomy						168											
Physiology	28	70	84	112									112	182			294
Materia Medica	38	9											38	9			47
General Inorganic Chemistry	56	112											56	112			168
Physics	20												20				20
General Biology	20	40											20	40			60
Histology	56	168											56	168			224
Embryology	16	32											16	32			48
General Pathology			56	112									56	112			392
Special Pathology and Morbid Anatomy					56	56			56	56			112	112			
Bacteriology			18	90									18	90			108
Pharmacology			56	48									56	48			104
Medical Chemistry			56	112									56	112			168
Hygiene					28								28				28
Dietetics					26								26				26
Therapeutics					56								56				56
Pharmacy						56								56			56
Physical Diagnosis				36										36			36
Medicine					56	60	28	56	56	56	56	126	112	116	84	182	494
Surgery			28		84	56	108	56	56	56	168	42	168	112	276	98	654
Obstetrics					56	28			56	28			112	56			163
Gynecology									28		112	42	28		112	42	182
Nervous and Mental Diseases					28		28		28		28		56		56		112
Diseases of the Eye									28		56		28		56		84
Diseases of the Ear, Nose and Throat									28		56		28		56		84
Dermatology					28				28				56				56
Pediatrics					28				28		28		56		28		84
Medical Jurisprudence									38				38				38
Climatology									18				18				18
Total	945		1088		1140				1358				1426	2121	668	322	4537

LIBRARY AND READING ROOM

MISS ADDIE HILL, *Librarian.*

The Library occupies the east end of the first floor of the College Building. The large room at the end of the hall is the reading-room; the two adjoining rooms contain cases and stacks for journals; and the fourth is used for sorting and storing duplicate journals and incomplete files of the same. The reading-room is very well lighted, is supplied with chairs and tables, and students may read or study here from 8 a. m. to 12 m. and from 2 to 5 p. m. The most important modern medical text-books, books of general reference, such as encyclopedias, indexes, etc., and the best American and foreign medical journals are kept in cases in the reading-room, and the students have easy access to them.

The Library includes 7,010 volumes and 500 pamphlets, some of which have been given by generous physicians. Most of the Library has been acquired by purchase. After the storm of 1900, over $4,000 was expended by the Regents of the University in restoring the Library, and for several years past an annual appropriation of $1,000 has been used in adding the more important texts and monographs and in completing many of the files of journals used for reference in making original investigations.

The books are classified according to the Dewey system, and are catalogued by author, subject and title, so that they can readily be used for consultation in the reading-room or for withdrawal from the Library.

The Library is in charge of the Librarian, who devotes her entire time to it.

Regular physicians, other than those of the teaching staff, may consult books and journals in the Library, but the priv-

ilege of withdrawing them from the Library is limited to those connected with the Medical School.

UNIVERSITY HALL

University Hall was donated to the University of Texas in 1897 by Mr. George W. Brackenridge, of San Antonio. This is one of numerous instances of the splendid generosity of Texans and of their deep interest in higher education. In order to encourage women to enter the professions, particularly the profession of medicine, this Hall was given to the University of Texas so as to provide a comfortable home for women during the time they are studying Medicine or Pharmacy. In furtherance of his original purpose, the donor has for several years past made generous provision for the maintenance of University Hall.

The Hall is a handsome brick building of three stories, the second and third of which are divided into about thirty rooms, including living rooms, bedrooms, bathrooms, parlors, etc. On the first floor are reception rooms, dining-rooms, kitchen, etc. The building is heated by steam and lighted by electricity. The rooms are well furnished, and are rented to women students for $5.00 per month.

The Superintendent of University Hall, Mrs. Callie G. Shaw, lives in the building and looks well after the comfort of the women students who reside there.

The students residing in University Hall have organized a dining club on the coöperative plan; excellent board is obtained here for about $12.00 per month.

SCHOLARSHIPS AND FELLOWSHIPS

In order to promote professional education among worthy and ambitious women, a scholarship open to women students

in the Medical Department of the University of Texas was founded in 1903 by Mr. George W. Brackenridge, of San Antonio.

This is known as the "Isabella H. Brackenridge Scholarship." The holder is entitled to the sum of $240, payable in installments of $30 at the end of each of the eight months of the scholastic year. This scholarship has been permanently endowed by bonds of the value of $5,000, deposited with the State Treasurer, the yearly income from these bonds being sufficient for the maintenance of the scholarship.

This scholarship is awarded to that woman of the School of Medicine above the Freshman Class who shall have attained, in the previous session of the School, the highest general average in the course of study, provided that this general average be not less than eighty-five per cent, and that the grade for the session in any one subject be not less than seventy per cent. When this scholarship is once awarded to any person for any year, such person is entitled to the same for each successive year she is a student in the School of Medicine, provided she maintains the average grades named above.

This scholarship is awarded at the end of each session to the person designated by the Dean of the Medical Faculty. In case the holder shall fall below the average standing of her class, or for any reason shall terminate her connection with the School, the monthly payments shall cease. The scholarship is held at present by Miss Lily C. Shuddemagen, B. A.

Provision has been made for eight scholarships of $200 each, which will be awarded to young women who desire to study medicine and who can satisfy the entrance requirements for full admission to the School of Medicine without any conditions. Preference will be given to graduates and

students of the College of Arts of the University of Texas and to graduates of affiliated schools.

The holders of these scholarships for the session of 1908-1909 are: Miss Una Howe, B. A., and Miss May McAdams, B. S.

Three fellowships, paying $700 each, have been maintained for the past two sessions for women who have specialized in chemistry, biology, and other subjects in which women can give assistance at the Medical Department of the University. The holders of these fellowships are required to undertake some original work for the promotion of medical science, or to give assistance in teaching.

These scholarships and fellowships are awarded by the President of the University and the Dean of the Medical Department to women who are prepared to undertake the work, and who present the most satisfactory credentials.

JOHN SEALY HOSPITAL

Board of Managers

Dr. James E. Thompson, President; Edward Randall, M. D., Vice-President; John Sealy, V. E. Austin, I. H. Kempner.

Visiting Staff

Physician and Neurologist.....Dr. Marvin L. Graves.
Surgeon.....Dr. J. E. Thompson.
Obstetrician and Gynecologist.....Dr. J. F. Y. Paine.
Pathologist.....Dr. James J. Terrill.
Ophthalmologist and Aurist.....Dr. Seth M. Morris.
Dermatologist and Assistant Surgeon.....Dr. H. R. Dudgeon.
Pediatrist and Assistant Physician.....Dr. James Greenwood, Jr.
Assistant Obstetrician and Gynecologist.....Dr. H. O. Sappington.
Assistant Physician.....Dr. Allen G. Heard.

Superintendent

Miss Clara Lincoln Shackford.

Resident Staff

Dr. L. B. Jackson. Dr. E. F. Jones.
Dr. W. E. Burk. Dr. T. F. Moore.

Clinical Pathologist

Dr. E. M. Lyon.

Outdoor Clinical Staff

Chief of Surgical Clinic.....H. R. Dudgeon, M. D.
Chief of Obstetrical and Gynecological Clinic.....H. O. Sappington, M. D.
Chief of Medical Clinic.....Allen G. Heard, M. D.
Chief of Dermatological Clinic.....H. R. Dudgeon, M. D.
Chief of Clinic for Diseases of the Eye, Ear, Nose, and Throat.....S. M. Morris, M. D.

Apothecary

Miss Mabel Giddings, Ph. G.

Superintendent of Training School for Nurses

Miss Ethel D'A. Clay.

"It being represented to the citizens of Galveston and to the people of the State of Texas, that John Sealy, late of the city of Galveston, departed this life in the month of August, 1884, inspired with a generous and philanthropic motive and possessed of a large real and personal estate, of which by his bequest he devoted $75,000 to the establishment of a hospital in said city, naming for that purpose the city council of the city of Galveston and the Regents of the University of Texas, jointly, for and in behalf of the Medical Department of said University, to manage and conduct the same for the reception and relief of sick and diseased persons; the property of said hospital shall be exempt from taxation, and shall be entitled to the benefit and provisions of the law relative to charitable institutions.

"The Regents may take and hold any additional donations,

grants, devises, and bequests in further support of, or addition to, said hospital.

"The direction, ownership, and disposition of said hospital shall be vested in said Regents and their successors, for the object and purposes heretofore set forth, and pursuant to the wishes and directions of the last will and testament of its founder aforesaid."

The John Sealy Hospital occupies a block of ground between Eighth and Ninth Streets, and between Avenues A and B, contiguous to the block occupied by the College Building. There are eight wards, besides a number of private rooms and rooms for officials.

In addition to the original bequest for the foundation of the hospital, the heirs of the late John Sealy have, from time to time, very generously contributed for its repair and improvement, a sum aggregating more than $80,000.

The entire hospital, including the nurses' home and the building for colored patients, is heated by steam and lighted by electricity. The wards and rooms are large and airy, having been built with special reference to the comfort of the sick in the prevailing warm seasons of this climate.

The upper floor of the central part of the main hospital building is occupied by a clinical amphitheatre, together with a sterilizing room, preparation rooms, dressing rooms, etc. Clinics are held here every week-day throughout the session. By a private benefaction this portion of the hospital has recently been completely remodeled and fitted up with all the facilities of a modern surgical operating room.

A new two-story brick building, accommodating about fifty beds, in two large wards, with several private rooms, has recently been erected on the north side of the hospital lot for the accommodation of the negro patients. This building was completed in 1901, and its construction was made possible by

a public benefaction amounting to $18,000. The old frame building has been thoroughly remodeled and now serves as a home for the nurses. A portion of the first floor is devoted to the laboratory of clinical medicine.

The Hospital is leased to the city of Galveston for a period of twenty-five years by the University of Texas at a nominal rental, with the agreement that the visiting staff to the Hospital shall be designated by the Regents of the University from the Medical Faculty. The lease provides that the John Sealy Hospital is to be used as a Medical College Hospital in connection with the Medical Department of the University of Texas, and that the wards, clinics, amphitheatre, etc., of the institution are to be used by the staff for giving clinical instruction to Medical students.

The city of Galveston maintains the John Sealy Hospital as a city hospital for the free treatment of the indigent sick and disabled by an annual appropriation of $37,000.00. The income derived from private rooms is an additional source of revenue.

There are few hospitals in which the patients can be utilized so fully for bedside and clinical instruction as in the John Sealy Hospital. The only limitations are the welfare and comfort of the patients. Without detracting in any way from the benefit derived by the patients from hospital treatment, the students are enabled to profit by the very exceptional clinical advantages.

The hospital has 155 beds, and this number can be increased in case of emergency. During the year 1908 there were 1804 patients treated in the wards, the average number of indoor patients for each day during the year being 115. In the dispensaries or outdoor clinics there were 5,031 new cases and 7,458 old cases; the average number of outdoor patients treated each day was 40.

The resident staff of the hospital is appointed annually from the graduating class according to the grades attained in the final examinations for the degree in medicine.

The nursing is done by the students of the School of Nursing under the direction of the Instructor in Nursing.

Galveston is now the foremost port in this country in the exportation of cotton, and is one of the most important seaport cities of the Southern States. Her shipping interests, already large, are growing rapidly. With this growth the number of hospital cases available for teaching purposes has been more than doubled within the past six years. For 1901 the average daily number of indoor patients in the John Sealy Hospital was 49; for 1905 the average number of patients for each day was 98; for 1906 it was 109; for 1907 it was 118; for 1908 it was 115.

The character of the population from which the hospital wards are filled assures a great variety of medical affections, while the numerous railroad and steamship lines which converge at this point furnish an abundance of surgical cases.

The following condensed report of the number of patients treated in the indoor and outdoor departments of the hospital and the number of operations performed from January 1, 1908, to January 1, 1909, will serve to show the excellent opportunities for clinical teaching in this school.

REPORT OF MEDICAL CASES IN HOSPITAL.

Diagnosis.	Total number.	Recovered.	Improved.	Not improved.	Not treated.	Died.
Alcoholism, acute	11	8	2	....	1	....
Alcoholism, chronic	33	....	30	1	2	....
Aneurism of thoracic aorta	1	....	....	....	....	1
Adenitis, cervical, tuberculous	1	....	....	....	1	....
Abscess, pulmonary	1	....	....	1	....	....
Anchylostomiasis	2	1	1	....	....	....
Anemia, secondary	2	....	2	....	....	....
Angina pectoris	1	....	1	....	....	....
Arterio-sclerosis, general	1	....	1	....	....	....
Asthma, bronchial	2	....	2	....	....	....
Atelectasis of lung, congenital	1	....	1	....	....	....
Auto-intoxication, intestinal	1	1	....	....	....	....
Bronchitis, acute	20	16	4	....	....	....
Bronchitis, chronic	36	36	....	....	....	....
Cardiac diseases:						
Aortic insufficiency	4	....	4	....	....	....
Aortic and mitral insufficiency	10	....	3	1	1	5
Mitral and aortic insufficiency	3	....	1	1	....	1
Mitral, aortic and tricuspid insufficiency	1	....	1	....	....	....
Mitral insufficiency	26	....	17	2	2	5
Mitral stenosis	1	....	....	....	....	1
Mitral stenosis and insufficiency	1	....	1	....	....	....
Hypertrophy and dilatation	1	....	1	....	....	....
Endocarditis, ulcerative	2	....	....	....	....	2
Myocarditis	3	....	1	1	....	1
Cystitis, chronic	2	1	1	....	....	....
Constipation	1	1	....	....	....	....
Diabetes insipidus	1	....	1	....	....	....
Diabetes mellitus	3	....	2	....	....	1
Dysentery, amebic	8	1	6	1	....	....
Dysentery, acute catarrhal	7	5	2	....	....	....
Eczema, chronic	1	....	1	....	....	....
Entero-colitis	2	....	1	....	....	1
Furunculosis	1	1	....	....	....	....
Gastritis, acute catarrhal	6	4	2	....	....	....
Gastritis, chronic	18	....	18	....	....	....
Gastritis, acute alcoholic	7	3	4	....	....	....
Gastritis, chronic alcoholic	8	....	8	....	....	....
Gastro-enteritis, acute	13	12	....	....	....	1
Gastro-enteritis, chronic	1	....	1	....	....	....
Gout	1	....	1	....	....	....
Heat exhaustion	2	2	....	....	....	....
Hematemesis	1	....	1	....	....	....
Hyperchlorhydria	4	1	3	....	....	....
Inanition	1	....	....	1	....	....
Indigestion, acute	2	2	....	....	....	....
Infectious diseases:						
Chicken pox	1	1	....	....	....	....
Diphtheria	4	3	....	....	....	1
Influenza	6	6	....	....	....	....
Malaria, tertian	29	26	1	....	2	....
Malaria, tertian and aestivo-autumnal	1	1	....	....	....	....
Malaria, aestivo-autumnal	33	32	1	....	....	....
Malaria, aestivo-autumnal, algid	1	....	....	....	....	1
Malaria, aestivo-autumnal, comatose	1	....	....	....	....	1
Measles	5	5	....	....	....	....

REPORT OF MEDICAL CASES IN HOSPITAL—Continued.

Diagnosis.	Total number.	Recovered.	Improved.	Not improved.	Not treated.	Died.
Scarlet fever	3	3	....	....	....	....
Smallpox	15	15	....	....	....	....
Typhoid fever	36	29	....	....	1	6
Jaundice, acute catarrhal	1	1	....	....	....	....
Leukemia, myelogenous	1	....	....	....	....	1
Leukemia, lymphatic	1	....	....	....	....	1
Liver, abscess of	2	....	....	....	2	....
Liver, cirrhosis of	4	....	3	....	....	1
Nephritis, acute parenchymatous	4	....	2	....	....	2
Nephritis, chronic parenchymatous	35	....	16	....	1	18
Nephritis, chronic interstitial	13	....	6	....	1	6
Pleuritis, acute fibrinous	3	2	1	....	....	....
Pleuritis, purulent	2	....	1	....	....	1
Pneumonia, broncho-	2	1	....	....	....	1
Pneumonia, lobar	9	4	1	....	....	4
Pyelitis	1	....	1	....	....	....
Pyelonephritis	2	....	2	....	....	....
Pyelonephrosis	1	....	1	....	....	....
Poisoning by:						
Arsenic	2	1	....	....	....	1
Carbolic acid	2	1	1	....	....	....
Chloranodyne	1	1	....	....	....	....
Lysol	1	1	....	....	....	....
Mercuric chloride	1	1	....	....	....	....
Morphine	1	1	....	....	....	....
Opium	1	....	....	....	....	1
Ptomain	1	1	....	....	....	....
Rheumatism, acute articular	18	7	11	....	....	....
Rheumatism, chronic articular	8	....	8	....	....	....
Rheumatism, acute muscular	17	6	9	2	....	....
Rheumatism, chronic muscular	7	....	7	....	....	....
Renal calculus	1	....	1	....	....	....
Sciatica	8	....	8	....	....	....
Stomatitis, mercurial	2	2	....	....	....	....
Stomatitis, ulcerative	2	1	1	....	....	....
Stomach, carcinoma of	2	....	....	1	....	1
Syphilis, secondary	2	....	2	....	....	....
Syphilis, tertiary	11	....	10	....	1	....
Tonsillitis, acute follicular	2	2	....	....	....	....
Thyroiditis, acute	1	....	1	....	....	....
Torticollis	1	1	....	....	....	....
Tuberculosis, enteric	2	....	2	....	....	....
Tuberculosis, laryngeal	1	....	1	....	....	....
Tuberculosis, meningeal	2	....	....	....	....	2
Tuberculosis, renal	1	....	....	1	....	....
Tuberculosis, pleuritic	1	....	1	....	....	....
Tuberculosis, pulmonary	67	....	16	22	2	27
Tuberculosis, acute miliary	1	....	....	....	....	1
Uremia	2	....	....	....	....	2
No diagnosis	5	....	2	....	3	....
Total	645	250	242	35	20	9

STATEMENT OF MENTAL AND NERVOUS CASES.

Diagnosis.	Total number.	Recovered.	Improved.	Not improved.	Not treated.	Died.
Amnesia, alcoholic	1		1			
Ataxia, locomotor	2		1	1		
Atrophy, progressive muscular	1			1		
Cerebral hemorrhage	9		2			7
Cerebral edema	2					2
Cocainomania	1		1			
Delerium tremens	3	1	1			1
Epilepsy	5		2	2	1	
Epilepsy, Jacksonian	1			1		
Hemiplegia	9		9			
Hysteria	1		1			
Idiocy	1			1		
Idiocy, diplegic	1			1		
Imbecility	1		1			
Insanity:						
Dementia praecox	2		2			
Dementia, secondary	1				1	
Dementia, senile	1				1	
Mania, depressive	1		1			
Mania, puerperal	1		1			
Melancholia	3		2		1	
Paresis, general	2			2		
Morphinomania	5		1	4		
Myelitis, disseminated	1					1
Myelitis, transverse	1					1
Migraine	1		1			
Neurasthenia	1		1			
Neuritis, multiple, alcoholic	7	2	5			
Nostalgia	2		1	1		
Paralysis, infantile, cerebral	1		1			
Paralysis, 11th and 12th nerves	1		1			
Poliomyelitis, anterior	1		1			
Psychasthenia	2		2			
Sclerosis, disseminated	1		1			
Syphilis, cerebral	2		1			1
Total	75	3	41	14	4	13

STATEMENT OF SURGICAL WARDS.

Diagnosis.	Total number.	Recovered.	Improved.	Not improved.	Not treated.	Died.
Abscess:						
Hepatic	4	4	....	....	....	....
Ischio-rectal	4	3	1	....	....	....
Miscellaneous	22	13	9	....	....	....
Psoas	2	....	1	....	....	1
Perineal	5	3	2	....	....	....
Adenitis, axillary	2	....	2	....	....	....
Adenoma:						
Thyroid	1	1	....	....	....	....
Ankylosis:						
Elbow	2	2	....	....	....	....
Hip	1	....	1	....	....	....
Appendicitis:						
Catarrhal	22	21	1	....	....	....
Suppurative	23	20	....	....	....	3
Bubo, inguinal	67	30	35	2	....	....
Burns	8	2	5	....	....	1
Bursitis, prepatellar	1	1	....	....	....	....
Carbuncle	3	2	....	....	....	1
Carcinoma:						
Breast	4	....	3	....	....	1
Cecum	1	....	....	1	....	....
Gall bladder	1	....	....	....	....	1
Oesophagus	1	....	....	1	....	....
Orbit	1	....	1	....	....	....
Penis	2	....	2	....	....	....
Rectum	6	....	2	3	....	1
Stomach	7	....	1	3	1	2
Vagina	1	....	1	....	....	....
Caries, femur	1	....	1	....	....	....
Cellulitis	14	9	3	....	....	2
Chancroid	21	7	14	....	....	....
Charbon	1	1	....	....	....	....
Cholecystitis	5	2	3	....	....	....
Cirrhosis of liver	1	....	....	....	....	1
Cleft palate	1	1	....	....	....	....
Cysts:						
Epididymis	1	1	....	....	....	....
Synovial (popliteal)	1	1	....	....	....	....
Thyroglossal duct	1	1	....	....	....	....
Cystitis	8	....	6	2	....	....
Dislocations:						
Elbow	1	1	....	....	....	....
Finger (interphalangeal)	1	1	....	....	....	....
Big toe (tarso-metatarsal)	2	2	....	....	....	....
Shoulder	2	....	2	....	....	....
Dysentery	1	....	1	....	....	....
Empyema of frontal sinus	1	1	....	....	....	....
Epididymitis	10	....	10	....	....	....
Epilepsey (Jacksonian)	3	....	1	1	1	....
Epithelioma:						
Cheek	1	....	1	....	....	....
Ear	1	....	1	....	....	....
Foot	1	....	1	....	....	....
Lip	1	....	....	1	....	....
Scalp	1	....	....	1	....	....

STATEMENT OE SURGICAL WARDS—continued.

Diagnosis.	Total number.	Recovered.	Improved.	Not improved.	Not treated.	Died.
Epulis	1	1				
Extravasation of urine	2	2				
Fistula:						
In ano	6	3	2		1	
Urethral	1			1		
Uretero-vaginal	1	1				
Vesico-rectal	1			1		
Foreign body:						
In trachea	1	1				
Fractures:						
Astragalus	1	1				
Colles'	2		1			1
Clavicle	1	1				
Fractures:						
Forearm	6	3	3			
Femur	5	4				1
Lower jaw	4	3	1			
Nasal bone	2	1	1			
Pelvis (compound)	1					1
Pott's	4	4				
Ribs	7	5	2			
Skull	3		2			1
Tibia	2	1	1			
Tibia and fibula	3	3				
Ulna	3	3				
Furunculosis	5	4	1			
Gall stones	3	2			1	
Gangrene, senile	1	1				
Goiter, cystic	1	1				
Gonorrhea	16		14	2		
Gumma of liver	1		1			
Hematocele (spermatic cord)	1	1				
Hemothorax	1		1			
Hemorrhoids	11	9	2			
Hammer toe	1	1				
Hernia:						
Femoral	2	2				
Inguinal	12	10			2	
Inguinal, strangulated	2	2				
Umbilical	2	2				
Umbilical, strangulated	1	1				
Ventral	4	4				
Hydrocele, tunica vaginalis	4	4				
Hypernephroma	1	1				
Hysteria. hip joint	1				1	
Incontinence:						
Urinary	1		1			
Fecal	1			1		
Ingrowing toe nail	1	1				
Intestinal obstruction (acute)	3				1	2
Keloid	1			1		
Lipoma	2	2				
Movable kidney	1	1				
Necrosis (bone)	2	2				
Neuralgia, trifacial	2		2			
Non-union of humerus	1	1				

STATEMENT OF SURGICAL WARDS.

Diagnosis.	Total number.	Recovered.	Improved.	Not improved.	Not treated.	Died.
Not diagnosed	2	....	....	....	2	....
Osteo-arthritis	3	....	2	1	....	....
Osteomyelitis, chronic	1	1	....	....	....	....
Painful amputation stump	1	1	....	....	....	....
Papilloma:						
Bladder	2	....	1	....	1	....
Nipple	1	1	....	....	....	....
Phimosis	3	3	....	....	....	....
Prolapse of rectum	1	....	1	....	....	....
Prostatic hypertrophy	11	3	4	2	....	2
Pyonephrosis	2	1	1	....	....	....
Pyothorax	4	2	....	....	....	2
Renal colic	1	....	1	....	....	....
Rheumatism, gonorrheal	3	....	3	....	....	....
Rupture:						
Colon	1	....	....	....	....	1
Diaphragm	1	....	....	....	....	1
Sarcoma:						
Humerus	1	1	....	....	....	....
Kidney	1	....	....	....	1	....
Neck	1	....	1	....	....	....
Scapula	1	1	....	....	....	....
Skin	1	1	....	....	....	....
Tibia	1	1	....	....	....	....
Sinuses	5	4	1	....	....	....
Spina bifida	2	2	....	....	....	....
Sprain:						
Ankle	7	4	2	....	1	....
Back	3	2	1	....	....	....
Knee	2	..	2	....	....	....
Wrist	2	....	2	....	....	....
Stomach, myoma of	1	....	1	....	....	....
Stricture:						
Urethra	30	....	30	....	....	....
Rectum	15	....	10	....	3	2
Synovitis, knee	3	1	2	....	....	....
Syphilis	11	....	10	....	....	1
Talipes:						
Equinovarus	2	2	....	....	....	....
Equinus	1	1	....	....	....	....
Torticollis, congenital	1	....	1	....	....	....
Tuberculosis:						
Ankle joint	2	2	....	....	....	....
Elbow Joint	1	....	1	....	....	....
Cervical glands	13	5	8	....	....	....
Axillary glands	2	2	....	....	....	....
Hip	3	....	2	1	....	....
Kidney	1	....	....	....	....	1
Knee joint	3	1	2	....	....	....
Peritoneum	4	....	4	....	....	....
Ribs	2	2	....	....	....	....
Skin	1	1	....	....	....	....
Spine	1	....	....	....	....	1
Tendon sheath	2	....	2	....	....	....
Testicle	1	1	....	....	....	....

STATEMENT OF SURGICAL WARDS—continued.

Diagnosis.	Total number.	Recovered.	Improved.	Not improved.	Not treated.	Died.
Ulcer:						
Duodenal	1	1	....	....	....	....
Gastric	1	....	1	....	....	....
Leg	27	7	20	....	....	....
Miscellaneous	7	4	3	....	....	....
Ulnar nerve divided	1	....	1	....	....	....
Undescended testicle	2	2	....	....	....	....
Varicocele	7	7	....	....	....	....
Venereal warts	2	....	2	....	....	....
Whitlow	3	....	3	....	....	....
Wounds:						
Contused	27	10	15	....	2	....
Gunshot	12	3	7	....	....	2
Incised	17	9	8	....	....	....
Infected	8	3	5	....	....	....
Lacerated	10	6	4	....	....	....
Punctured	6	3	2	....	....	1
Stabs	10	4	5	....	....	1
Total	719	325	316	25	18	35

OPERATIONS IN SURGICAL DEPARTMENT.

Abscesses drained:	
Alveolar	3
Axillary	1
Ischio-rectal	3
Liver	3
Miscellaneous	7
Perineal	3
Rectum	1
Amputations:	
Finger	9
Forearm	1
Interscapulo-thoracic	1
Leg, seat of election	3
Penis	2
Syme's	1
Thigh	4
Toe	5
Anastomosis:	
Entero-intestinal	2
Gastro-intestinal	5
Appendicostomies	1
Appendectomies	47
Bubectomies	49
Castrations	2
Chancroids cauterized	3
Cholecystectomies	2
Cholecystotomies	4
Circumcisions	6
Cirrhosis of the liver, Talma's operation for	1
Cleft palates repaired	2
Colotomies, inguinal	5
Colostomy	1
Curettement, tubercular ulcers	3
Cystoscopies	19
Cystotomies, suprapubic	2
Dislocations reduced:	
Shoulder	2
Tarso-metatarsal joint	1
Ectopia testis, Bevan's operation for	2
Empyema, antrum of Highmore, drained	1
Erasion of knee joint	1
Examination of:	
Hip joint	1
Prostate	1
Recto-vesical fistula	1
Excisions:	
Adenoma, breast	1
Adenoma, thyroid	1
Ankle joint	1

OPERATIONS IN SURGICAL DEPARTMENT.

Excisions—continued.	
Axillary glands	2
Breast (Halsted)	3
Bursa prepatellar	1
Cancer, foot	1
Cancer, vagina	1
Carbuncle	1
Cocyx	1
Cyst, thyro-glossal duct	1
Elbow joint	2
Epithelioma, face	2
Epulis	1
Glands of the neck, tubercular	12
Hip joint	3
Keliods	3
Lipomas	3
Metatarso-phalangeal joint	1
Papillomas	3
Perforating ulcer	1
Rectum (Kraske)	2
Ribs, tubercular	2
Sarcoma, neck	1
Sarcoma, shoulder	2
Shoulder joint	1
Sinus, tubercular	2
Toe nails	3
Ulcer, thumb (Charbon)	1
Ulcer, wrist, tubercular	2
Varicose veins of leg	1
Exploration of ankle	1
Exploratory laparotomies	9
Extraction of bullet	1
Fistula in ano	2
Fractures reduced:	
Elbow	1
Leg	2
Pott's fracture badly united	1
Radius	2
Wrist (Colles')	1
Gastrectomies, partial	2
Hemorrhoidectomies	10
Herniotomies:	
Femoral	2
Inguinal	12
Umbilical	2
Ventral	6
Hydrocele, radical cure of	3
Incisions, multiple for cellulitis	7
Knee joint, straightened	1

OPERATIONS IN SURGICAL DEPARTMENT.

Nephrectomies	4
Nephropexies	1
Neurotomies:	
Spinal accessory	1
Supraorbital	1
Osteotomy, femur	1
Proctoscopy	3
Prostatectomies:	
Perineal	2
Suprapubic	3
Pyothorax, drained	8
Resections:	
Rib	1
Small intestine	1
Sequestrectomies	4
Silkworm gut suture removed from sinus	1
Skin graft	2
Spina bifida (excised)	2
Stricture:	
Oesophagus dilated	1
Rectum dilated	7
Talipes, equinovarus, Phelps' operation for	2
Tenorrhaphy:	
Extensor indicis	1
Extensor tendons, of hand	1
Tenotomy:	
Hamstring tendons	1
Sternomastoid	1
Tendo Achillis	2
Thyroidectomy, partial	1
Trephining, skull	2
Ureter, transplanted	1
Urethrotomies:	
External	16
Internal	14
Varicocele, radical cure	8
Wire removed from bone	3
Wiring of:	
Clavicle	1
Humerus	1
Lower jaw	1
Teeth in fracture of lower jaw	3
Ulna and radius	1
Ulna	1
Wounds dressed:	
Lacerated	1
Stab	2
Total	445

Eye Cases—Indoor.

Diagnosis.	Total number.	Recovered.	Improved.	Not improved.	Not treated.	Died.
Cataract, single	4	3	....	1	....	....
Cataract, double	2	2	....	....	....	....
Conjunctivitis, acute catarrhal	3	1	2	....	....	....
Conjunctivitis, acute gonorrheal	4	3	1	....	....	....
Eye, contusion	1	1	....	....	....	....
Eye ball, traumatic rupture of	1	1	....	....	....	....
Hordeolum	1	1	....	....	....	....
Iris, traumatic rupture of	1	....	1	....	....	....
Iritis, syphilitic	4	1	3	....	....	....
Lens, dislocation of	1	....	....	1	....	....

Ear, Nose and Throat Cases—Indoor.

Diagnosis.	Total number.	Recovered.	Improved.	Not improved.	Not treated.	Died.
Adenoids, postnasal, chronic	5	5	....	....	....	....
Epiglottis, syphilitic ulceration of	1	1	....	....	....	....
Laryngitis, syphilitic	1	....	1	....	....	....
Pharyngitis, syphilitic, tertiary	1	....	1	....	....	....
Total	30	19	9	2	....	....

OPERATIONS IN EYE, EAR, NOSE AND THROAT DEPARTMENT.

Adenoids, removal of	7
Cataract, extraction of, double	1
Cataract, extraction of, single	2
Eye, enucleation of	2
Tonsillectomy, double	8
Total	20

STATEMENT OF GYNECOLOGICAL AND OBSTETRICAL WARDS.

Diagnosis.	Total number.	Recovered.	Improved.	Not improved.	Not treated.	Died.
Abortion	8	8	....	....	....	....
Abortion, incomplete	3	3	....	....	....	....
Abscess:						
Pelvic	7	5	2	....	....	....
Stitch	1	1	....	....	....	....
Vaginal	1	1	....	....	....	....
Vulvo-vaginal	1	....	1	....	....	....
Births	27	27	....	....	....	....
Cervix uteri:						
Carcinoma	3	....	3	....	....	....
Laceration	12	5	4	3	....	....
Stenosis	2	1	1	....	....	....
Cystocele	1	1	....	....	....	....
Cystitis, gonorrheal	1	....	1	....	....	....
Cyst:						
Labial	1	1	....	....	....	....
Vaginal	1	1	....	....	....	....
Dysmenorrhea	1	1	....	....	....	....
Eclampsia	1	1	....	....	....	....
Endocervicitis	1	....	1	....	....	....
Endometritis:						
Atrophic	2	1	1	....	....	....
Chronic	2	1	1	....	....	....
Fungoid	3	3	....	....	....	....
Gonorrheal	7	3	3	1	....	....
Hypertrophic	3	2	1	....	....	....
Polypoid	5	4	1	....	....	....
Septic	9	5	2	2	....	....
Simple	14	6	5	3	....	....
Gestation, ectopic	1	1	....	....	....	....
Hydatidiform mole	1	1	....	....	....	....
Hydrosalpinx	2	2	....	....	....	....
Leucorrhea	4	....	4	....	....	....
Menorrhagia	3	2	1	....	....	....
Metritis	1	1	....	....	....	....
Ovary:						
Cystic	15	12	....	3	....	....
Degenerated	1	1	....	....	....	....
Fibroid	8	7	1	....	....	....
Hematoma	1	1	....	....	....	....
Ovaries:						
Cystic	12	10	2	....	....	....
Degenerated	1	1	....	....	....	....
Suppurating	1	1	....	....	....	....
Perineum, laceration of	12	8	4	....	....	....
Peritonitis, general	1	1	....	....	....	....
Peritonitis, pelvic	6	3	3	....	....	....
Pregnancies	41	27	....	....	14	....
Puerperal infection	2	1	1	....	....	....
Pyosalpinx:						
Double	15	12	3	....	....	....
Single	1	1	....	....	....	....
Salpingitis:						
Chronic	1	1	....	....	....	....
Double	9	9	....	....	....	....
Single	2	1	1	....	....	....

STATEMENT OF GYNECOLOGICAL AND OBSTETRICAL WARDS—continued.

Diagnosis.	Total number.	Recovered.	Improved.	Not improved.	Not treated.	Died.
Uterus:						
Anteflexion	4	1	2	1	....	....
Carcinoma of body	1	....	1	....	....	....
Carcinoma of cervix and body	8	....	5	2	....	1
Fibroid	29	19	2	5	....	3
Hyperinvolution	1	1	....	....	....	....
Hyperplastic	3	3	....	....	....	....
Myoma	9	4	2	3	....	....
Prolapse, complete	1	1	....	....	....	....
Retroversion	1	....	1	....	....	....
Septic	1	1	....	....	....	....
Ulcers:						
Chancroidal	5	1	4	....	....	....
Syphilitic	1	....	1	....	....	....
Urethra, caruncle of	1	1	....	....	....	....
Vagina, atresia of	1	....	....	....	....	1
Vaginitis, gonorrheal	6	2	4	....	....	....
Venereal warts	2	1	1	....	....	....
Vulva, hematoma of	1	1	....	....	....	....
Vulvitis, gonorrheal	2	1	1	....	....	....
Total	335	222	71	23	14	5

OPERATIONS IN GYNECOLOGICAL DEPARTMENT.

Abscess, pelvic, drained	6
Abscess, labial, incised	1
Abscess, stitch, incised	2
Cervix, amputation of	2
Curettage	62
Examinations for diagnosis	59
Hysterectomy, vaginal	2
Laparotomies:	
Enucleation of uterine fibroid	3
Hysterectomy	2
Hystero-salpingo oöphorectomy	31
Oöphorectomy, double	1
Oöphorectomy, single	2
Salpingectomy	1
Salpingo-oöphorectomy, double	9
Salpingo-oöphorectomy, single	4
Suspension of the uterus	7
Pan-hysterectomy	2
Perineorrhaphy (Emmett's operation)	8
Trachelorraphy	3
Urethral caruncle, incised	1
Total	208

SUMMARY OF OUT-DOOR CLINICS.

Summary of Out-Door Clinics.	New cases.	Old cases.	Total consultations.
Gynecological cases in out-door clinic	757	1,034	1,791
Surgical cases in out-door clinic	1,600	2,893	4,493
Medical cases in out-door clinic	1,824	1,526	3,350
Eye cases in out-door clinic	588	1,540	2,128
Ear, nose, and throat cases in out-door clinic	262	465	729
Totals	5,031	7,458	12,491

GENERAL SUMMARY.

General Summary.	Total number.	Recovered.	Improved.	Not improved.	Not treated.	Died.
Total medical cases in wards	645	250	242	35	20	98
Total nervous cases in wards	75	3	41	14	4	13
Total in Medical Service	720	253	283	49	24	111
Total surgical cases in wards	719	325	316	25	18	35
Total eye, ear, nose, and throat cases in wards	30	19	9	2	.....	.....
Total obstetrical and gynecological cases in wards	335	222	71	23	14	5
Total number of in-door cases	1,804	.....	.....	.....	.....	.....
Total number of new cases in out-door clinic	5,031	.....	.....	.....	.....	.....
Grand total	6,835	.....	.....	.....	.....	.....
Total operations in surgical service	445	.....	.....	.....	.....	.....
Total operations in gynecological service	208	.....	.....	.....	.....	.....
Total operations in eye, ear, nose and throat service	20	.....	.....	.....	.....	.....
Average number in-door patients each day	115	.....	.....	.....	.....	.....
Average number out-door patients each day	40	.....	.....	.....	.....	.....

ROSTER OF SCHOOL OF MEDICINE

FRESHMAN CLASS 1909–1910

Hour.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9 a. m.	Anatomy, B. Lab. of Histology, A.	Anatomy, A. Lab. of Histology, B.	Anatomy, B. Lab. of Histology, A.	Anatomy, A. Lab. of Histology, B.	Anatomy, B. Lab. of Histology, A.	
10 a. m.						
11 a. m.	Anatomy, A. Lab. of Biology and Embryology, B.	Anatomy, B. Lab. of Biology and Embryology, A.	Anatomy, A. Lab. of Biology and Embryology, B.	Anatomy, B. Lab. of Biology and Embryology, A.	Anatomy, A. Lab. of Histology, B.	Physiological Lab., 2nd half term.
12 m.						
2 p. m.	Chemical Laboratory.	Biology and Embryology, one-third term each.	Chemical Laboratory.	Biology and Embryology, one-third term each.	Physiological Lab., 2nd half term.	
3 p. m.		Histology.		Histology.		
4 p. m.	Physiology, 2nd half term.	Chemistry.	Materia Medica.	Materia. Medica.		
5 p. m.	Physics, 1st half term.	Physiology, 2nd half term.	Physics, 1st half term.		Chemistry.	

SOPHOMORE CLASS, 1909–1910

Hour.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9 a. m.	Anatomy, B. Pathol. Lab., A.	Anatomy, A. Pathol. Lab., B.	Anatomy, B. Pathol. Lab., A.	Anatomy, A. Pathol. Lab., B.	Pathology.	Chemical Laboratory.
10 a. m.					Physiology.	
11 a. m.	Anatomy, A and B.	Anatomy, B. Physiol. Lab., A.	Anatomy, A. Physiol. Lab., B.	Anatomy, B. Physiol. Lab., A.	Anatomy, A. Physiol. Lab., B.	Bacteriology, one-third term.
12 m.						
2 p. m.	Bacteriology and Pharmaco-dynamics, one-third term each. [See special roster.]	Bacteriology and Pharmaco-dynamics, one-third term each. [See special roster.]	Bacteriology, Physical Diagnosis, and Pharmaco-dynamics, one-third term each. [See special roster.]	Bacteriology, Physical Diagnosis, and Pharmaco-dynamics, one-third term each. [See special roster.]	Chemical Laboratory.	
3 p. m.						
4 p. m.	Therapeutics.	Therapeutics.	Physiology.	Minor Surgery.	Bacteriology, one-third term. [See special roster.]	
5 p. m.	Physiology.	Chemistry.	Pathology.	Chemistry.		

JUNIOR CLASS, 1909–1910

Hour.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
8 a. m.		Dermatology.	Ophthalmology.	Diseases of Ear, Nose, and Throat.		
9 a. m.	Lab. Clin. Med., Surgical Clinic, 1 Section each.	Medical Clinic, Surgical Ward Class, 1 Section each.	Lab. Clin. Med., Surgical Clinic, 1 Section each.	Medical Clinic, Surgical Ward Class, 1 Section each.	Lab. Clin. Med., Surgical Clinic, 1 Section each.	Demonstrations in Surgical Pathology.
10 a. m.						
11 a. m.	Special Pathology.	Surgical Anatomy.	Lab. of Pharmacy, one-half term. Lab. of Pathology, one-half term.	Surgical Anatomy.	Special Pathology.	Surgical Anatomy.
12 m.	Hygiene, one-half term.					
2 p. m.	Medical Ward Class.	Nervous and Mental Diseases.	Demonstration in Obstetrics.	Nervous Diseases Clinic.	Lab. of Pathology, one-half term. Lab. of Pharmacy, one-half term.	
3 p. m.	Dietetics, one-half term.	Surgery.	Medicine.	Surgery.		
4 p. m.	Therapeutics.	Therapeutics.	Dietetics, one-half term.	Medical Ward Class.	Obstetrics.	
5 p. m.	Genito-Urinary Diseases.	Hygiene, one-half term.	Pediatrics.	Obstetrics.	Medicine.	

SENIOR CLASS, 1909–1910

Hour.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
8 a. m.	Medical Jurisprudence, first two-thirds of term.	Dermatology.	Ophthalmology.	Diseases of Ear, Nose, and Throat.	Medical Jurisprudence, first two-thirds of term.	Case Taking (Medical Ward) and Laboratory of Clinical Medicine.
9 a. m.	Operative Surgical Clinic.	Medical Clinic.	Operative Surgical Clinic.	Medical Clinic.	Operative Surgical Clinic.	
10 a. m.		Gynecological Clinic.		Gynecological Clinic.		Operative Gynecological Clinic.
11 a. m.	Special Pathology.	Pediatric Clinic or Case Taking.	Gynecology.	Gross Morbid Anatomy.	Special Pathology.	
12 m.	Outdoor Clinics.	Outdoor Clinics.	Outdoor Clinics.	Outdoor Clinics.	Outdoor Clinics.	Outdoor Clinics.
2 p. m.	Clinic in Otology, etc.	Nervous and Mental Diseases.	Clinic in Ophthalmology.	Nervous Diseases Clinic.	Clinic in Ophthalmology.	
3 p. m.	Medical Ward Class.	Medical Ward Class.	Medicine.	Case Taking, Medical Ward.	Operative Surgery.	
4 p. m.	Demonstration in Obstetrics.	Surgery.	Gross Morbid Anatomy.	Surgery		
5 p. m.	Obstetrics.	Obstetrics.	Pediatrics.	Clinic in Otology, etc.	Medicine.	

SPECIAL ROSTER FOR CLASS SECTIONS, 1909-1910

THE FRESHMAN CLASS is divided into two sections (A and B) for practical work in the laboratory of Anatomy and in the laboratory of Biology, Histology, and Embryology. Each section attends periods of two hours in these laboratories, as shown by the major roster.

THE SOPHOMORE CLASS is divided into two sections (A and B) for practical teaching in the laboratories. The major roster shows the arrangement for work in the laboratories of Anatomy, Pathology, and Physiology. For laboratory exercises in Bacteriology, Physical Diagnosis, and Pharmaco-dynamics, the following special roster will be followed:

SECTION A.			SECTION B.		
Bacteriology.	Physical Diagnosis.	Pharmaco-dynamics.	Bacteriology.	Physical Diagnosis.	Pharmaco-dynamics.
Mon. to Sat. incl., two hours daily, Oct. 4 to Dec. 14, 1909.	Wed. and Thurs., 2–4 p. m., Jan. 3 to Mar. 4, 1910.	Tues., Wed., and Thurs., 2–4 p.m., Mar. 14 to May 13, 1910.	Mon. to Sat. incl., two hours daily, Jan. 3 to Mar. 4, 1910.	Wed. and Thurs., Oct. 4 to Dec. 14, 1909.	Tues., Wed., and Thurs., 2–4 p.m., Mar. 14 to May 13, 1910.

THE JUNIOR CLASS is divided into two sections (A and B) for instruction in the laboratory of Clinical Medicine and Surgical Ward Classes. When not thus engaged, the members of the class attend clinics in Surgery, Medicine, and Gynecology, as shown by the major roster. The following special roster will be followed:

SECTION A.		SECTION B.	
Lab. Clin. Med.	Surgical Ward Class.	Lab. Clin. Med.	Surgical Ward Class.
Mon., Wed., and Fridays, Oct. 4 to Dec. 14, 1909.	Tuesdays and Thursdays, Jan. 27 to May 13, 1910.	Mon., Wed., and Fridays, Jan. 3 to Mar. 4, 1910.	Tuesdays and Thursdays, Oct. 4, 1909, to Jan. 27, 1910.

THE SENIOR CLASS is divided into four sections (A, B, C, and D) for work in the four departments of the Outdoor Clinics from 12 to 1 p. m. daily, except Sundays, as shown in the subjoined roster:

DEPARTMENT OF	Oct. 4, 1909, to Nov. 19, 1909.	Nov. 21, 1909, to Jan. 26, 1910.	Jan. 27, 1910, to Mar. 19, 1910.	Mar. 22, 1910, to May 9, 1910.
Medicine	A	D	C	B
Surgery	B	A	D	C
Gynecology	C	B	A	D
Special Subjects	D	C	B	A

TEXT-BOOKS

First Year

Anatomy: Cunningham's *Text-Book of Anatomy* ($6.00); Morris's *Human Anatomy* ($6.00); Piersol's *Anatomy* ($7.50); Gray's *Anatomy* ($6.00; Cunningham's *Dissector's Guide* ($5.00); Spalteholz, translated by Barker ($10.00).

Physiology: Howell's *Text-book* ($4.00); Stewart's *Manual of Physiology* (5th ed.) ($3.75); Rockwood's *Manual of Physiological Chemistry* ($1.00); Hammarsten's *Physiological Chemistry,* translated by Mandel ($4.00); Simon's *Physiological Chemistry* ($3.25); Beddard, Elkins, Hill, Macleod, and Pembrey's *Practical Physiology* ($5.00).

Chemistry: Simon's *Manual of Chemistry* ($3.00); Garbade's *Laboratory Manual of Inorganic Chemistry.*

Physics: Daniell's *Physics for Medical Students* ($1.25); Gage's *Physics* ($1.30).

Materia Medica and Therapeutics: H. C. Wood's *Therapeutics* ($5.00); Cushny's *Pharmacology and Therapeutics* ($3.75); *United States Dispensatory* ($7.00); Thornton's *Prescription Writing* ($1.25).

Biology: Campbell's *Elementary Biology* ($1.60); Braun's *Animal Parasites of Man* ($5.00).

Histology: Böhm, Davidhoff, and Huber ($3.50); Bailey ($3.00); Piersol ($3.50); Stöhr ($3.00); Ferguson ($3.50).

Embryology: Heisler ($2.50); Reese's *Introduction to Invertebrate Embryology* ($1.40); Foster and Balfour ($2.60); McMurrich ($3.00).

Lexicon: Gould's *Student's* ($2.50); Dorland ($4.50); Thomas ($3.00); Gould's *Illustrated* ($10.00).

Second Year

Anatomy: Same as above.

Physiology: Howell ($4.00); Stewart ($3.75); Tigerstedt ($4.00); Ott ($3.00); Foster (Am. ed.) ($4.50);

American Text-book of Physiology ($6.00); Beddard's *Practical Physiology* ($5.00).

Chemistry: Austin's *Manual of Clinical Chemistry* ($1.75); Kobert's *Toxicology for Physicians* ($2.50); Dwight's *Toxicology* ($1.00); Holland's *Medical Chemistry and Toxicology* ($3.00).

Therapeutics: Same as in first year.

Surgery: Wharton's *Manual of Minor Surgery* ($3.00).

Pathology: Adami's *General Pathology* ($6.00); Ziegler's *General Pathology* (10th ed.) ($5.00); Mallory and Wright's *Pathologic Technique* ($3.00).

Bacteriology: Smith's *Laboratory Exercises in Bacteriology* ($1.50); McFarland's *Text-book of Pathogenic Bacteria* ($3.50); Chester's *Determinative Bacteriology* ($2.60).

Lexicon: Same as in first year.

Third and Fourth Years

Anatomy: Treves's *Surgical Applied Anatomy* ($2.00); Woolsey ($5.00); McLachlan's *Applied Anatomy,* 2 vols. ($6.00); Campbell's *Surgical Anatomy* ($5.00).

Therapeutics: Same as above; Coblentz's *Treatise on Pharmacy* ($3.50).

Dietetics: Hutchison ($5.00); Yeo ($2.50); Thompson ($5.00).

Practice of Medicine: Osler ($5.50); Tyson (4th ed.) ($5.50); Strümpell ($6.00); Anders ($5.50); Hare ($6.50); Cabot's *Physical Diagnosis* ($2.50); Butler's *Diagnostics of Internal Medicine* ($6.00); Musser's *Medical Diagnosis* ($6.50); Da Costa's *Physical Diagnosis* ($3.50); Wood's *Chemical and Microscopical Diagnosis;* Simon's *Clinical Diagnosis* ($4.00); Van Valzah and Nisbet's *Diseases of the Stomach* ($3.50).

Surgery: Rose and Carless's *Manual of Surgery* ($5.00);

Da Costa's *Modern Surgery* ($5.00); Treves's *Student's Handbook of Surgical Operations* ($2.50); Binnie's *Operative Surgery* ($3.00); Bickham's *Operative Surgery* ($6.00); Tillman's *Surgery and Surgical Pathology* ($5.00); Jacobson and Rowland's *The Operations of Surgery,* 2 vols. ($10.00); Bowlby's *Surgical Pathology* ($2.00); Berg's *Surgical Diagnosis* ($3.25); *International Text-book of Surgery,* 2 vols. ($10.00); Mummery's *The After-Treatment of Surgical Operations* ($2.00).

Gynecology: Ashton ($6.50); Reed ($5.00); Penrose (5th ed.) ($3.75); Kelly ($15.00); Montgomery (2nd ed.) ($5.00).

Obstetrics: Hirst's *Text-Book of Obstetrics* (4th ed.) ($5.00); *American Text-Book of Obstetrics* (2nd ed.) ($7.00); Edgar's *Practice of Obstetrics* (2nd ed.) ($6.00); Webster's *Text-Book of Obstetrics* ($5.00).

Pathology: Same as above; Stengel's *Pathology* ($5.00); Delafield and Prudden's *Pathology* ($5.50); Lazarus-Barlow's *Pathologic Anatomy* ($6.50); *American Text-Book of Pathology* ($7.50).

Nervous and Mental Diseases: Church and Peterson's *Nervous and Mental Diseases* ($5.00); Kraeplin's *Clinical Psychiatry* ($3.50); Clouston's *Mental Diseases* ($4.25); Starr's *Organic and Functional Nervous Diseases* ($6.00); Collins's *Treatment of Nervous Diseases* ($5.00); Oppenheim's *Nervous Diseases* ($5.00).

Diseases of Children: Holt's *Diseases of Infancy and Childhood* ($6.00); Rotch's *Pediatrics* ($6.00); Ashby and Wright's *Diseases of Children* ($3.50); Koplik's *Diseases of Infancy and Childhood* ($5.00); Chapin's *Infant Feeding* ($2.25).

Diseases of the Skin: Stelwagon (4th ed.) ($6.00); Pusey ($6.00); Jackson ($2.75); Walker ($3.00); Shoemaker

($5.00); Crocker ($5.00); Jamison ($6.00); MacLeod's *Pathology of the Skin* ($3.75).

Venereal Diseases: White and Martin ($6.00); Hayden ($1.75); Lydston ($5.00); Morton ($3.00).

Ophthalmology: May's *Diseases of the Eye* ($2.00); de Schweinitz's *Diseases of the Eye* ($5.00).

Diseases of Ear, Nose, and Throat: Gleason ($2.50); Bosworth's *Diseases of the Nose and Throat* ($4.50).

Medical Jurisprudence: Reese ($3.00); Taylor's *Medical Jurisprudence* ($4.50); Peterson and Haines's *Legal Medicine and Toxicology,* 2 vols. ($5.00 each).

Hygiene: Harrington's *Practical Hygiene* ($4.25); Louis C. Parkes's *Practical Hygiene* ($4.00); Egbert's *Hygiene and Sanitation* ($2.25); Bergey's *Principles of Hygiene* ($3.00); Notter and Firth's *Manual of Hygiene* ($1.25); Abbott's *Hygiene of the Transmissible Diseases* ($2.50).

Lexicon: Same as in first year.

NOTE.—In the above list of text-books, the price noted in the parentheses is that of the cheapest named edition in each case, as a rule bound in cloth. In each case only the latest edition should be purchased. Sheep binding will cost about fifty cents or a dollar more than the price quoted. The student is urged to procure for himself at least one text-book upon each subject. In some instances choice between several authors is left with the student; in such cases the work preferred is usually named first.

DEGREES AND HONORS

At the commencement exercises held at the completion of the sixteenth regular session, May 30, 1908, the following candidates were granted the degree of Doctor of Medicine:

Allen, Robert Russell.
Bibb, Lewis Bradley.
Bloss, Claude Marion.
Bramlette, Felix Bernard.
Burk, William Edward.
Eckel, George Mitchell.

Eckhardt, Joseph Carl Augustus.
Gamble, Jesse Franklin.
Goodson, Thomas Neavitt.
Gray, Clarence Eugene.
Halbert, Ada Ben.
Helm, Hugh Max.
Jackson, Luke Bunyan.
Jones, Everett Foster.
Mewshaw, Robert E. Lee.
Moore, Tarleton Flemming.
Powell, Eli Pearl.
Rayburn, Clute Edward.
Rhodes, Benjamin Franklin.
Sykes, Edwin Meredith.
Thomas, John Calhoun.
Walker, John Hale.
Weller, Cyrus Burford.
Winfield, Carra Fannin.
Young, Orville Daniel.

The system of prizes has been abolished and, as a substitute, the names of those students in the graduating class who attain an average grade for the entire Senior Year of 90 per cent or over, are published as an honor roll.

The following members of the Graduating Class of 1908 attained an average grade of 90 per cent or over in these examinations: John C. Thomas, Felix B. Bramlette, Luke B. Jackson, Hugh M. Helm, and Jesse F. Gamble.

HOSPITAL APPOINTMENTS

Upon the results of the final examinations at the close of each session, four resident physicians are selected from the members of the graduating class to serve as internes in the John Sealy Hospital. Occupants of these positions receive their board, washing, and lodging free, and enjoy superior opportunities for acquiring practical experience in the different departments of medicine and surgery. The term of service is for one year.

Internships in several other hospitals in the State are open to the members of the graduating class of the Medical School, and the appointments are made either according to the class standing in the final examinations in the University, or by a special competitive examination.

The following members of the class which graduated in

1908 have been appointed resident physicians in the hospitals named:

John Sealy Hospital, Galveston

L. B. JACKSON. E. F. JONES.
W. E. BURK. T. F. MOORE.

St. Mary's Infirmary, Galveston

J. F. GAMBLE. C. E. GRAY.
C. B. WELLER.

St. Joseph Infirmary, Houston

J. C. A. ECKHARDT.

Santa Rosa Infirmary, San Antonio

F. B. BRAMLETTE. T. N. GOODSON.

Cotton Belt Hospital, Texarkana

H. M. HELM.

Providence Sanitarium, Waco

E. M. SYKES.

ASSOCIATIONS

The Alumni Association

The Alumni Association of the Medical Department of the University of Texas, as a branch of the General Alumni Association of the University, has been in existence for a number of years, and has as its object the consideration and active prosecution of plans for the betterment of the School in such ways as the alumni are able to devise. It is open to the graduates of any of the Schools of the Medical Department. It meets twice a year, once during the last week of the college term, upon a date assigned by its officers, and once during the annual meeting of the State Medical Association.

The University Medical Club

The University Medical Club is an organization of the physicians connected with the teaching and hospital corps of the School, having for its object the study of medical problems arising in the experience and work of the members. The club is open to the members of the third-year and fourth-year classes in Medicine, and to the senior students in Pharmacy, these students being urged to take as active a part as they desire in the scientific proceedings of the society. Physicians of the city of Galveston who are interested in the work are also eligible as members.

The Students' Council

The Students' Council is an organization of the students of the institution, having as its object the mutual betterment of its members and the consideration and prosecution of such school matters as may properly be undertaken by the student body. Under its auspices is published *The University Medical,* a monthly medical journal; and it is likewise the basis of organization of such bodies as the Students' Coöperative Book Store and the University Dining Club, although these in their special work act independently of the parent society.

Students' Christian Association

The Students' Christian Association conducts a religious devotional service every Sunday afternoon during the session. Its object is to better the religious life of the student body. From time to time prominent men from the city are invited to address the meetings.

EXPENSES

Each student on entering the Department of Medicine is required to pay a University Matriculation Fee of thirty dollars. This fee is paid but once, and is not required after the

first term of attendance. If it has been paid in any other Department of the University, it is not again required in the Medical Department. Other fees are in the nature of laboratory fees (to pay for material used by the student in laboratory exercises), and laboratory and library deposits.

Instead of making separate deposits for each of the laboratories, one general deposit will be required each year to cover all loss, breakage, or damage to apparatus, books, or other equipment of the institution. These deposits are intended to cover the value of apparatus entrusted to each student in the laboratories or of books withdrawn by the student from the library. At the close of the session, on return of apparatus in good condition, these deposits are returned to the student. Articles of apparatus or books not thus returned are charged against the deposits, their cost to the institution deducted therefrom, and the balance returned to the student. When the value of such broken or unreturned property of the School is greater than the deposit, a special charge is made to replace the article in question.

A library fee of one dollar will be deducted from the library deposit made by each student at the beginning of the session. This will be used to cover the expense of wear and tear of the books and for binding journals, books, etc.

Students who matriculate after the registration days (September 28, 29, 30, and October 1, 1909) will be required to pay a fine of $3.00.

The following list of expenses will indicate the items and total payments required each year, the items of deposit being returnable from the annual total in accordance with the above explanation:

FIRST YEAR.

Matriculation fee (payable once only)		$30.00
Laboratory fee in Chemistry	$ 5.00	
Laboratory fee in Physiology	5.00	
Laboratory fee in Anatomy	10.00	
Laboratory fee in Histology (including Biology)	5.00	
Total laboratory fees		25.00
Deposit for library, laboratories, etc. (returnable as explained above)		15.00
Total payment upon matriculation		$70.00

SECOND YEAR.

Laboratory fee in Chemistry	$ 5.00	
Laboratory fee in Pathology	5.00	
Laboratory fee in Physiology	5.00	
Laboratory fee in Anatomy	10.00	
Laboratory fee in Bacteriology	5.00	
Total laboratory fees		30.00
Deposit for library, laboratories, etc. (returnable as explained above)		20.00
Total payment upon matriculation		$50.00

THIRD YEAR.

Laboratory fee in Pharmacy	$ 5.00	
Laboratory fee in Pathology	5.00	
Laboratory fee in Clinical Medicine	5.00	
Laboratory fee in Surgical Anatomy	5.00	
Total laboratory fees		20.00
Deposit for library, laboratories, etc. (returnable as explained above)		12.50
Total payment upon matriculation		$32.50

FOURTH YEAR.

Laboratory fee in Operative Surgery	$ 5.00
Deposit for library, laboratories, etc. (returnable as explained above)	5.00
Total payment upon matriculation	$10.00

Graduate physicians are permitted to join the class without payment of any fee unless in competition for the degree, except where laboratory courses are undertaken, when the usual fee of $5.00 is required for each course as elected.

Board

The cost of living will vary with the views of students. Good board, including room, light, and fuel, can be had at prices ranging from $15.00 to $20.00 per month.

Women students of Medicine and Pharmacy are furnished rooms in University Hall at a cost of $5.00 per month. Women students can get good table board in University Hall at a cost of $12.00 to $13.00 per month.

The University Dining Club is an organization of about 130 to 140 members, the object of which is to furnish good meals on the coöperative plan at a minimum cost. At present this club rents a hall two squares from the College, and good table board is furnished at a cost of about $12.00 per month.

Students are advised to go directly to the College Building, Strand, between Ninth and Tenth Streets, on their arrival in the city. The Provost will be on hand, and will take pleasure in furnishing all necessary information and aid to students desiring to obtain board.

Letters requesting information as to the curriculum, or requests for catalogues, should be addressed to President S. E. Mezes, or to Dr. W. S. Carter, Dean, Medical Department

of the University of Texas, Galveston, Texas. Business communications should be addressed to Thomas H. Nolan, Provost, Medical Department of the University of Texas, Galveston, Texas.

SCHOOL OF PHARMACY

ANNOUNCEMENT FOR THE SIXTEENTH ANNUAL SESSION

The School of Pharmacy was inaugurated with the opening of the session of 1893-1894, in connection with the School of Medicine, in the College Building of the Medical Department. The present session began on October 1, 1908, and will close on May 29, 1909. The sixteenth annual session will begin on October 1, 1909, and will continue for eight months.

The instruction is conducted by the teaching staff of the chairs of Materia Medica and Therapeutics, and of Chemistry and Toxicology, in connection with that given the classes in Medicine, and by the Professor of Pharmacy and the Demonstrator of Botany and Pharmacy. In addition, instruction is given in Organic and Pharmaceutical Chemistry by the Professor of Chemistry.

The accommodations of the School are the same as those described in the Catalogue of the School of Medicine, page 11. The Laboratory of Pharmacy occupies the east end of the basement of the College Building, which is well adapted to the purpose, being well lighted and supplied with all the forms of apparatus required for the teaching of this important branch. The Chemical Laboratory occupies the west end of the basement of the building. It accommodates about two hundred and seventy-five working desks or tables, and is supplied with a full stock of chemicals and apparatus for demonstration and individual practice by the members of the class. The laboratory work in vegetable histology and microscopic pharmacognosy is given in the Laboratory of Botany, which is equipped with microscopes for teaching this subject by practical exercises to small sections of the class.

REQUIREMENTS FOR ADMISSION

Men and women are admitted to the School of Pharmacy under equal conditions. The requirements for admission are as follows:

1. Age

Candidates are required to be at least 17 years old, and if under 21 years of age, to present written evidence of permission to matriculate from the parent or guardian.

2. Character

Candidates are required to present testimonials of good character from two reputable and responsible persons, preferably physicians or pharmacists.

3. Vaccination

Each candidate must present evidence of having been vaccinated at a date sufficiently recent to insure immunity against smallpox, or be vaccinated at the time of matriculation.

4. Scholarship

Candidates are required to present evidence of having had sufficient preliminary education to undertake the work of the course.

A. ADMISSION WITHOUT EXAMINATION

a. Graduates and Students from Other Institutions

The following persons are admitted to the School of Pharmacy without examination: (1) graduates and students from other approved colleges and universities; (2) students from other departments of this University; (3) students and graduates of the Texas Agricultural and Mechanical College; (4) graduates of the Texas State Normal Schools; (5) persons holding first-grade teachers' certificates of the Texas public-school system; (6) graduates of affiliated schools.

b. Individual Approval

Candidates over 21 years of age may be admitted upon personal approval by the Dean and the Examining Committee, provided they furnish satisfactory evidence of having had a preliminary education equivalent to that required for admission by examination, so that they are able to profit by the work undertaken.

B. ADMISSION ON EXAMINATION

Candidates who do not meet the conditions named above will be required to pass an examination in the following subjects:

1. *English.* Proficiency in orthography, grammar, rhetoric, and composition will be determined by requiring the candidate to write a short essay upon some assigned subject.

2. *History.* The questions cover General History, the History of the United States, and the History of Texas.

3. *Mathematics.* The questions are given on (a) Arithmetic, (b) Algebra (through quadratic equations), and (c) Plane Geometry.

Instead of Geometry one year's work in Physics, Latin, German or French may be offered as an equivalent.

ADMISSION TO ADVANCED STANDING

Students who have attended one full course of lectures in a recognized school of pharmacy may be admitted to the second year of the course upon passing satisfactory examinations upon the physics of pharmacy, processes of manufacture and the chemical constituents of the official inorganic compounds, pharmaceutical preparations of crude drugs, general inorganic chemistry, physics, materia medica, and botany, including vegetable histology.

EXAMINATION AND CLASS STANDING

The rules governing examinations, class standing, exemptions, and promotions are the same as in the School of Medicine (see page 24), except that students in the School of Pharmacy are not allowed to carry conditions in more than two subjects.

Students of Pharmacy, if conditioned in more than two subjects, will be required to repeat the unsatisfied course in its entirety.

Entrance Examinations will be held September 28, 29, and 30, 1909.

Students who matriculate after the registration days (September 28, 29, 30, and October 1, 1909) will be required to pay a fine of $3.00.

No regular student will be matriculated after October 15 of any year except by unanimous consent of the Faculty.

Examinations for the removal of conditions and for advanced standing will be held September 28, 29, and 30. No examination for the removal of conditions will be held after October 1 of any year. Students will not be allowed to attend class work until they have matriculated.

PLAN OF INSTRUCTION AND CURRICULUM

The teaching consists of systematic lectures upon Pharmacy, Materia Medica and Therapeutics, Chemistry, Physics, Botany, and Prescription Reading, Writing, and Compounding, together with a large amount of laboratory work upon these subjects. The course of study is a graded one, the students being required to pass an examination upon the matter taught in the Junior Class before they are permitted to enter the Senior Class. The following curriculum exhibits the arrangement of the work:

Junior Year: Systematic lectures upon (1) the principles of pharmacy, physics of pharmacy, crude drugs and their recognition, proximate principles of plants, prescription compounding and dispensing; (2) inorganic chemistry and physics; (3) materia medica; (4) general botany; (5) physiology; (6) bacteriology.

Laboratory work upon (1) pharmacy; (2) inorganic chemistry; (3) plant analysis and vegetable histology; and (4) prescription compounding and dispensing.

Senior Year: Systematic lectures upon (1) pharmaceutical manufacturing, analysis and assaying, purification of drugs, compounding and dispensing; (2) chemical analysis and organic chemistry; (3) physiological action of drugs.

Laboratory work upon (1) pharmacy; (2) chemical analysis and organic chemistry; (3) microscopic pharmacognosy; and (4) analytical pharmacy.

DEPARTMENTS OF INSTRUCTION

PHARMACY

RAOUL R. D. CLINE, B. S., A. M., PH. G., *Professor of Pharmacy.*

JOHN C. BUCKNER, PH. G., *Demonstrator of Pharmacy.*

A. JUNIOR CLASS

1. Pharmacy.

Two lectures and seven laboratory hours each week throughout the session.

The lectures deal with the theory and practice of Pharmacy, special emphasis being laid upon the purification and preservation of pharmaceuticals and chemicals and the methods of combining medicines.

During the session 200 hours in the laboratory are devoted to the manufacture and purification of medicated waters, medicated solutions, extracts, fluid extracts, tinctures, wines, syrups, infusions, misturas, elixirs, emulsions, glycerites, vinegars, collo-

dions, eye waters, douches, sprays, gargles, pills, suppositories, ointments, plasters, liniments, etc.

During the latter part of the year special instruction is given in the manufacture of toilet preparations and perfumery.

The first three months of this laboratory course are spent in the study of the physics of pharmacy, *i. e.*, the determination of coefficients of solubilities, points of fusion, points of ebullition, points of congelation, the examination and correction of apparatus, such as balances, graduated vessels, thermometers, pipettes, and burettes. Crystallization, fractional distillation, percolation, infusion, and sublimation are studied from a practical standpoint.

2. *Prescription Laboratory.*

Eleven laboratory hours a week throughout the session.

This course is devoted to the reading, writing, compounding, and dispensing of physicians' prescriptions. Special attention is paid to modes of making medicines sightly, palatable, and permanent.

3. *Bacteriology.*

One lecture and seven laboratory hours a week for one-third of the session.

The subject is treated mainly from a pharmaceutical standpoint, including, however, instruction in sanitary examinations and in purification of waters and foods.

B. SENIOR CLASS

4. *Pharmacy.*

Two lectures and seven laboratory hours a week throughout the session.

These lectures deal with the manufacture, purification, and preservation of chemical salts, acids, alkaloidals, alkaloidal salts, resins, resinoids, glucosides, ethers, fruit essences, and synthetic-als, such as urotropin, sulphonal, piperazine, acetanilide, phenacetin, aspirin, tanalbin, aristol, tannigen, guncotton, terebene, terpin hydrate, terpinol, thyocol, creosote, menthol, iodoform, iodol, chloroform, chloral, monobromated camphor, camphoric acid, ether, acetic ether, nitrous ether, amyl nitrate, salol,

salicin, benzol, nitro-benzol, oil of wintergreen, acetone, gallic acid, pyrogalol, resorcin, beta-naphthol, protargol, sulpho-carbolic acid, sulpho-carbolates, etc.

The laboratory course is devoted to the manufacture and purification of the above-mentioned substances.

5. *Pharmaceutical Analytical Laboratory.*

Two laboratory hours weekly throughout the session.

This course includes the gravimetric and volumetric analysis of everything made or handled during the entire course. Special instruction is given in testing chemicals and pharmaceuticals, and in alkaloidal and glucosidal determinations. This course includes instruction in qualitative and quantitative chemical examination of the ordinary food stuffs, toilet articles, and proprietary preparations.

6. *Prescription Laboratory.*

Nine hours a week throughout the session.

A total of 308 hours for the year is devoted to the reading, writing, compounding, and dispensing of physicians' prescriptions. Special attention is paid to easy and rapid modes of making prescriptions sightly and palatable, and to methods of increasing their potency and absorbability.

BOTANY

JOHN C. BUCKNER, PH. G., *Lecturer and Demonstrator of Botany.*

A. JUNIOR CLASS

1. *Botany.*

Two lectures a week throughout the session.

These lectures bear upon structural, physiological, histological, and taxonomic botany, with special reference to pharmacy.

2. *Vegetable Histology.*

Four laboratory hours a week throughout the session.

This is a course in vegetable histology, special stress being laid upon the microscopic structure of plants used in medicine. This course is necessary for an intelligent understanding of the course given to the Senior Class in powdered drugs.

3. Crude Drugs.

Three laboratory hours weekly during one-half of the session.

The course includes the recognition of plants and plant parts, the identification of adulterants, a knowledge of the active constituents, their uses, and a classification of all such plants, together with methods best adapted to their preservation.

4. Field Botany.

This course consists of three hours a week in the field during the second half of the session.

After a careful study of the typical flora of Galveston Island, excursions to the mainland are made, where a further study of Texas plants is possible. Special attention is paid to those indigenous plants which possess medicinal activity.

B. SENIOR CLASS

5. Crude Drugs.

Two laboratory hours each week for one-half of the session.

In addition to the review of the work done in the Junior Year, special attention is paid to the chemical constituents of plants and plant parts, and to the modes of preventing deterioration. Instruction is also given concerning such insects and fungus growths as are specially destructive to drugs.

6. Powdered Drugs.

Three hours a week during the entire session.

This course is devoted to a study of the crystallography of alkaloids and chemicals under the microscope. The microscopical appearance of powdered drugs is dealt with, looking mainly to the detection of adulterants and to the identification of substances examined. The course is given in the Laboratory of Vegetable Histology.

7. Field Work.

Two hours a week during the last half of the session.

The ground covered is practically the same as in the Junior course, save that more attention is paid to the lower plant organisms.

CHEMISTRY

ARTHUR EVERETT AUSTIN, A. M., M. D., *Professor of Chemistry and Toxicology.*

WALTER T. GARBADE, B. S., PH. G., *Demonstrator of Chemistry.*

1. General Inorganic Chemistry.

Junior Year. Two lectures and four laboratory hours a week throughout the session.

This course comprises the elements of chemistry, the fundamental laws of chemical action, the more important properties of the elements and their principal compounds, the tests for the acids and metals, and an introduction to qualitative analysis.

2. Physics.

Junior Year. Two lectures a week during the first third of the session.

This course is designed to acquaint the student with the underlying principles of elementary physics, particularly the phenomena of heat, light, and electricity. Those subjects having special bearing upon his work in pharmacy are thoroughly gone into, and all lectures are fully illustrated with experiments.

3. Medical and Analytical Chemistry.

Senior Year. Two lectures and four laboratory hours each week during the session.

This course comprises a thoroughly practical drill in the qualitative analysis of mixtures of unknowns; in the analysis of potable and mineral waters; analysis of milk; analysis of urine; the principles of gravimetric and volumetric analysis; and the processes of detecting mineral and vegetable poisons in complex organic mixtures.

4. Organic and Pharmaceutical Chemistry.

Senior Year. Two lectures and three laboratory hours a week during the entire session.

This course covers the elements of organic chemistry, and includes the detection of preservatives and adulterants in foods and in medicinal preparations.

The Chemical Laboratory occupies the greater portion of the lower floor of the College Building and contains 275 working tables, each table being supplied with a complete equipment of apparatus and reagents for individual work by each student. The laboratory is well equipped for the purpose of teaching the subject, and the practical work is done by each student under the personal supervision of the Professor and the Demonstrator.

MATERIA MEDICA AND THERAPEUTICS

Edward Randall, M. D., *Professor of Materia Medica and Therapeutics.*

1. Materia Medica.

Junior Year. Two lectures or recitations a week for nineteen weeks.

These lectures include a general description and classification of crude drugs, their physical, chemical, and medical properties, the preparations, doses, tests, antidotes, toxicology, etc.

The Laboratory of Pharmacy contains a complete cabinet of drugs, active principles, etc., for use by each student in the practical study of Materia Medica as the different subjects are discussed during the term.

2. Therapeutics.

Senior Year. Two lectures weekly throughout the session.

In this course the therapeutical classification of remedies and their therapeutical and chemical compatibilities are considered. Prescription writing, with the dosage, in both the metric and the apothecary systems, is duly dwelt upon. It is the aim of the course to qualify the student for the work of the pharmacist, without making a prescribing doctor of him.

LIBRARY AND READING ROOM

The library and reading-room of the institution are open to the classes in Pharmacy on the same conditions as to students in Medicine. The more important works bearing upon

the subjects taught in the course are upon the shelves, and the current and back numbers of the best known pharmaceutical journals are available in the reading-room for consultation.

SCHOLARSHIP

In 1889, the Texas State Pharmaceutical Association established a scholarship in the School of Pharmacy of the University of Texas. When first established, the sum of $150 was given, and the selection of the beneficiary was made by a committee approved by the President of the Association. In 1900 the sum was increased to $200, and continues up to the present time. In 1901 the selection of the holder of the scholarship was left to the Professor of Pharmacy, his action in the matter being ratified by the Executive Committee of said Association. The scholarship is held at present by Miss Rosalie McAdams, of the Senior Class.

ROSTER OF SCHOOL OF PHARMACY

JUNIOR CLASS, 1909–1910

Hour.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9 a. m.	Botany.		Pharmaceutical Laboratory.	Pharmacy.	Botany.	Pharmacy.
10 a. m.	Prescription Reading, Writing, and Compounding.	Pharmaceutical Laboratory.		Crude Drugs, first half-term. Field Botany, second half-term.	Prescription Reading, Writing, and Compounding.	Prescription Reading, Writing, and Compounding.
11 a. m.						
12 m.						
2 p. m.	Chemical Laboratory.	Prescription Reading, Writing, and Compounding.	Chemical Laboratory.	Vegetable Microscopy.	Vegetable Microscopy.	
3 p. m.						
4 p. m.		Chemistry.	Materia Medica.	Materia Medica.		
5 p. m.	Physics, first half-term.		Physics, first half-term.		Chemistry.	

ROSTER OF SCHOOL OF PHARMACY

SENIOR CLASS, 1909–1910

Hour.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9 a. m.	Prescription Reading, Writing, and Compounding.	Prescription Reading, Writing, and Compounding.	Organic Chemistry.	Assay of Pharmaceuticals and Chemicals.	Organic Chemistry.	Chemical Laboratory.
10 a. m.			Microscopy of Powdered Drugs and Chemicals.		Crude Drugs, first-half term. Field Botany, second-half-term.	
11 a. m.	Pharmaceutical Laboratory.	Pharmaceutical Laboratory.		Pharmaceutical Laboratory.		
12 m.					Pharmacy.	Pharmaceutical Bacteriology.
2 p. m.	Pharmacy.	Prescription Reading, Writing, and Compounding.		Chemical Laboratory.	Chemical Laboratory.	
3 p. m.			Prescription Reading, Writing, and Compounding.			
4 p. m.	Therapeutics.	Therapeutics.			Pharmaceutical Laboratory.	
5 p. m.		Chemistry.		Chemistry.		

TEXT-BOOKS

First Year

Pharmacy: Remington's *Pharmacy* ($6.00); Coblentz's *Newer Remedies* ($1.00).

Chemistry: Simon's *Manual of Chemistry* ($3.00); Garbade's *Manual of Inorganic Chemistry.*

Physics: Daniell's *Physics* ($1.25); Gage's *Physics,* ($1.30).

Botany: Bastin's *College Botany* ($2.50); Gray's *Field Botany* ($1.80); Small's *Flora of the Southwestern United States* ($3.25).

Materia Medica: H. C. Wood ($6.00); *United States Dispensatory* ($7.00).

Prescription Work: Scoville's *The Art of Compounding* ($2.50).

Pharmacognosy: Sayre ($4.00).

Second Year

Chemistry: Austin's *Clinical Chemistry* ($1.75); Leach's *Analysis of Foods* ($7.50); Holland's *Medical Chemistry and Toxicology* ($2.00); Remsen's *Organic Chemistry* ($1.20).

Pharmacognosy: Sayre ($4.00).

Pharmaceutical Technology: Cline, 2 vols. ($4.00).

Volumetric Analysis and Assay of Drugs: Cline ($1.50); Sutton ($4.50).

DEGREES AND HONORS

Upon the following members of the class of 1908 the degree of Graduate in Pharmacy (Ph. G.) was conferred at the Commencement held May 30, 1908:

Campbell, William Henry.
Garcia, Alfonso Yldifonso.
Harris, Roy.
Holman, Scott White.
Mahaffey, Luther.
Marek, Emil Henry.

Mast, Henry Reuben.
Nichols, Cranz.
Skaggs, Leonard Alton.
Turk, Bascom Andrew.
Voelcker, Edwin Bruno.
Wallace, Thomas Reuben.
Wallis, Walter William.

ASSOCIATIONS

The graduates of the School of Pharmacy are eligible to membership in the Alumni Association of the Medical Department of the University of Texas (see p. 82). A Pharmaceutical Association, composed of the students of this school alone, has been formed for the study of essentially pharmaceutical problems. The students of Pharmacy are eligible to the Students' Council and other student bodies mentioned on page 83.

EXPENSES

Each student on entering the School of Pharmacy is required to pay a University matriculation fee of thirty dollars. This fee is paid but once. If it has been paid in any other Department of the University, it is not again required in the Medical Department. Other fees are in the nature of laboratory fees of five or ten dollars for each laboratory attended (to pay for material used by the student in laboratory exercises) and laboratory and library deposits. These deposits are intended to cover the value of apparatus entrusted for use to each student in the laboratories, or of books withdrawn from the Library. At the close of the term, on the return of apparatus and books in good condition, these deposits are returned to the student. Articles of apparatus or books not thus returned are charged against these deposits, their cost value deducted therefrom, and the balance returned to the student. When the value of such broken or unreturned property of the School is greater than the deposit, a special charge is made

ADDITIONAL COURSES OF INSTRUCTION.

Beginning with the session 1909-10 a course in Physiological Chemistry and a course in Bacteriology will be added to the curriculum for the Junior year. A laboratory fee of $5.00 will be charged for each of these courses and the deposit for breakage in the laboratories for the Junior year will be $20.00.

to replace the article in question. The list of expenses given below will indicate the individual items and the total payments required each year, the items of deposit being returnable from the annual total in accordance with the above explanation.

Instead of requiring separate deposits in each of the laboratories, the authorities will require one deposit to be made by each student to cover breakage, loss, or damage to apparatus, books, or other equipment.

A library fee of one dollar is deducted from the library deposit made by each student at the beginning of the session. This will be used to cover the expense of wear and tear of the books, and for binding journals, books, etc.

Students who matriculate after the registration days (September 28, 29, 30, and October 1, 1909) will be required to pay a fine of $3.00.

JUNIOR YEAR

Matriculation fee		$30.00
Laboratory fee in Chemistry	$ 5.00	
Laboratory fee in Pharmacy	10.00	
Total laboratory fees		15.00
Deposit for library, laboratories, etc. (returnable as explained above)		20.00
Total payable upon matriculation		65.00

SENIOR YEAR

Laboratory fee in Chemistry	$ 5.00	
Laboratory fee in Pharmacy	10.00	
Total laboratory fees		15.00
Deposit for library, laboratories, etc. (returnable as explained above)		15.00
Total payable upon matriculation		$30.00

BOARD

Good board, with fuel and lights, can be had at prices ranging from $15.00 to $20.00 a month.

Students are advised to go directly to the College Building, on Strand, between Ninth and Tenth Streets, on their arrival in the city, where the Provost of the Medical Department will be found, who will take pleasure in furnishing all necessary information and aid in obtaining board without delay.

Letters requesting information or Catalogue should be addressed to President S. E. Mezes, or to Dr. Wm. S. Carter, Dean, Medical Department of the University of Texas, Galveston, Texas. Business communications should be addressed to Thomas H. Nolan, Provost, Medical Department of the University of Texas, Galveston, Texas.

SCHOOL OF NURSING

STAFF OF INSTRUCTORS AND OTHER OFFICERS

Miss Ethel D'A. Clay, *Superintendent, Clinical Instructor in Nursing.*

Lecturers

J. E. Thompson, F. R. C. S. (Eng.), *Surgical Nursing.*
M. L. Graves, M. D., *Medical Nursing.*
Edward Randall, M. D., *Materia Medica.*
W. S. Carter, M. D., *Physiology and Hygiene.*
James Greenwood, Jr., M. D., *Diseases of Children.*
S. M. Morris, M. D., *Diseases of the Eye, Ear, Nose, and Throat.*
H. R. Dudgeon, M. D., *Surgery.*
William Keiller, F. R. C. S. (Ed.), *Anatomy.*
J. F. Y. Paine, M. D., *Obstetrics and Gynecology.*
H. O. Sappington, M. D., *Obstetrics and Gynecology.*
M. L. Graves, M. D., *Nervous and Mental Diseases.*
Oscar H. Plant, M. D., *Physiology and Dietetics.*
H. T. Aynesworth, M. D., *Anatomy.*
James Greenwood, Jr., M. D., *Clinical Pathology.*
Allen G. Heard, M. D., *Fever Nursing.*

Committee on Instruction

Miss Ethel D'A. Clay (ex-officio).
James E. Thompson, F. R. C. S.
M. L. Graves, M. D.
Wm. S. Carter, M. D., (ex-officio).
} From Faculty of School of Medicine.

Advisory Board of Lady Managers

Mrs. George E. Mann, *President.*

Mrs. Edward Randall, *Secretary and Treasurer.*

Mrs. George Sealy.
Mrs. L. Fellman.
Mrs. J. E. Thompson.
Mrs. R. Waverley Smith.
Mrs. H. Kempner.
Miss Mary Davis.
Mrs. J. Wharton Terry.
Mrs. J. C. League.

MRS. J. P. ALVEY.
MRS. J. B. ALLEN.
MRS. D. E. WALLIS.
MRS. H. L. ZIEGLER.
MRS. FREDERICK SCHNEIDER.

GENERAL INFORMATION

The School of Nursing was established as a successor to the "John Sealy Hospital Training School for Nurses." The latter training school was supported and managed by a board of ladies resident in the city of Galveston, as a public charity, and, while well accomplishing its purposes, it had grown in the course of years to be a tax upon the generosity and attention of those who had become interested in it. In order to save it from going out of existence, therefore, and at the same time to extend the opportunity for medical instruction to the classes of nurses, the Regents of the University, in 1897, created the School of Nursing as one of the regular Schools of the Medical Department of the University, and the pupil nurses are recognized as students of this branch of the Medical Department. The Regents of the University are responsible for the instruction of the student nurses in all branches, and have placed the management of the curriculum in the hands of a committee composed of the Clinical Instructor of Nursing, the Dean, and two members elected annually from the Faculty of Medicine by the members of the Faculty. This committee has arranged a curriculum and appointed, from the members of the Faculty and corps of Lecturers and Demonstrators, the special instructors in each branch.

After having completed the course of training satisfactorily, if found worthy in every particular, the pupil nurses are, upon recommendation of the Medical Faculty, given certificates of proficiency as trained nurses by the University of Texas and the President of the Board of Managers, or

other authorized officials on the part of the management of the John Sealy Hospital.

In the establishment of this School of Nursing, the Regents of the University have definitely delegated to the Board of Hospital Managers all governmental supervision of the School not directly concerning the instruction of the classes. All question of admission to classes, rules, regulations governing the duties and privileges of nurses, matters concerning the moral and physical welfare of pupil nurses, support of individual nurses, and matters of penalty or dismissal, are determined by the Board of Hospital Managers.

An Advisory Board of Lady Managers has been created, their duties being to aid the Superintendent of Nurses in questions of government when required, and to advise the Board of Hospital Managers in questions involving the care of the nurses. The members of this Board act as visiting committees, and endeavor to keep in touch with the students and to aid them when possible.

ANNOUNCEMENT

It is now recognized that two years do not allow sufficient time for properly preparing students for the numerous and responsible duties of nursing. Following the example of other institutions of high standing, the University of Texas has extended the course of training in the School of Nursing from two to three years. This change went into effect October 1, 1907.

For the first four months of the course, candidates who have been approved by the Superintendent of the Training School will be admitted on probation. At the expiration of this time, if the probationer proves to be capable of continuing the course satisfactorily, she will be admitted to full standing and enrolled as a pupil nurse.

During the period of probation the probationer receives board, lodging, and laundry free. After full admission into the Training School, in return for their services in the wards of the hospital, the pupil nurses receive board, lodging, laundry, and uniforms free, and, in addition, an allowance of five dollars a month during the balance of the period of training is made by the Board of Managers to defray the necessary expenses for text-books, etc.

REQUIREMENTS FOR ADMISSION

The capacity of the School is limited to thirty-two pupil nurses.

Those wishing to obtain the course of instruction must apply to the Superintendent of the Training School for Nurses, John Sealy Hospital, Galveston, Texas, upon whose approval they will be received into the School on probation. The age of candidates must be from twenty to thirty-five years. The candidate should send, with answers to the questions sent to her, two letters testifying to her good moral character, and one from her physician stating that she is in sound health. She should be of at least average height and physique.

Within the first week of probation the applicant will be examined in reading, penmanship, simple arithmetic, and English. Candidates must be able to read aloud well, to write legibly and accurately from dictation, and to understand arithmetic as far as fractions and percentage. While this is the minimum educational requirement, women of superior education are preferred.

The Superintendent has full power to decide as to the fitness of a probationist for the work, and as to the desirability of her retention to the end of the period of probation. She can suspend any nurse for cause at any time, and, with the

formal approval of the Board of Hospital Managers, dismiss a nurse for serious misconduct or inefficiency.

The regular academic year begins June 1, and it is advisable for pupil nurses to enter the School before October 1. In case the course of training shall expire before the commencement day, the nurse will be expected to remain in the service and under control of the Hospital authorities until commencement day arrives.

Vacancies will be filled on the first of June of each year. Vacancies arising at other times will be filled as they occur, and the candidates will be required to conform to the preceding rules.

Candidates who prove satisfactory will be accepted as pupil nurses after signing an agreement to remain in the service for the length of time required by the rules of the School; to submit to the control of the Superintendent; and to obey the rules of the Hospital and School. They will reside in the Home for Nurses, adjacent to the Hospital, and serve the first year as assistants in any or all of the wards of the Hospital.

They will be expected to perform any duty assigned to them by the Superintendent, and to act as nurses in any of the wards or in any department of the Hospital. They are required during the months of training to wear the dress and shoes prescribed for the institution.

The day nurses are on duty from 7 a. m. to 7 p. m.; the night nurses, from 7 p. m. to 7 a. m. Reasonable time is given for meals, exercise, study, and rest. One afternoon each week, and additional time on Sundays, will be allowed to each pupil nurse.

A vacation of two weeks will be allowed each year.

In cases of sickness, pupils will be gratuitously cared for

in their rooms or in the Hospital, but the time lost must be made up.

Blanks containing questions required to be answered by the candidates for the information of the Superintendent of Nurses will be mailed upon application.

COURSE OF TRAINING AND INSTRUCTION

The course of instruction is a graded one, extending over three terms. The plan of instruction includes systematic lectures, demonstrations, and actual bedside practice of the principles taught; and from time to time, the pupils are required to present papers upon various themes connected with the work.

The course is arranged as follows:

JUNIOR YEAR

Systematic lectures upon (1) Anatomy; (2) Physiology; (3) Materia Medica, including the dosage and uses of drugs, the antidote of poisons, etc.; (4) Nursing of Medical Cases (Fever Nursing); (5) the Ethics of Nursing, including the duties of nurses in caring for patients, both in hospitals and in private homes.

Practical instruction in ward-work, bed-making, the care of patients, including toilet, feeding, attention to excretions, application of lotions, stupes, poultices, blisters, and the care of the same, prevention and treatment of bed-sores, cupping and leeching, clinical observations, symptoms and the records of temperature, pulse and respiration, baths, enemata, ventilation, disinfection, etc.

INTERMEDIATE YEAR

Systematic lectures upon (1) Surgical Nursing; (2) Medical Nursing; (3) Obstetrics; (4) Gynecology; (5) Dietetics.

Practical instruction in surgical nursing, including surgical technique; preparation for operations, both in hospitals and in homes; the care of patients after operations; practical experience of three months under a permanent head nurse in the operating room; obstetrical nursing; gynecological nursing; dietetics; the preparation of foods for artificial feeding and for various diseased conditions.

SENIOR YEAR

Lectures upon (1) the Nursing of Infants and Children; (2) Hygiene; (3) Nursing of Nervous and Mental Diseases; (4) Eye Cases; (5) Ear, Nose, and Throat Cases; (6) Hospital Management and Administration; (7) Ethics of Nursing, with special reference to the nursing of private patients; (8) Massage and Swedish Movements.

Practical instruction in infant feeding; the nursing of special cases, including mental and nervous diseases, and diseases of the eye, ear, nose, and throat; urine analysis; massage and Swedish movements; ward management and hospital administration.

During the larger part of the Senior Year the members of the class will be placed in charge of the different wards and of the private rooms of the Hospital in rotation. Opportunity is thus afforded for acquiring valuable training and experience in matters of hospital management. Those who display administrative ability and desire to fit themselves for institutional work will be given further instruction in the methods of hospital administration.

The requirements for promotion and graduation are essentially the same as in the School of Medicine. Final examinations are held upon all subjects taught, and the pupil is also graded for the quality of ward-work which she has done. Most of the instruction above outlined is given in the Hos-

pital and in the Nurses' Home. The practical clinical instruction is given in the wards of the Hospital. Some of the lectures and demonstrations are given in the Medical College.

TEXT-BOOKS

Anatomy and Physiology: Kimber.
Primary Nursing: McIsaac.
General Nursing: Hampton.
Diet in Sickness and Health: Winthrop.
Massage and Swedish Movements: Oström.
Materia Medica: Stoney.
Care of the Baby: Griffith.
Surgical Nursing: Stoney's *Surgical Technique.*
Fever Nursing: Wilson.
Nervous Diseases and the Insane: Mills.
Medical Dictionary: Gould.
Obstetrics: Lee.
Gynecology: Lee.

ROSTER OF WARD DUTIES AND INSTRUCTIONS—JUNIOR CLASS OF NURSES, 1909-1910

Hours.	Sunday.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
7 a. m.	Ward.	Ward.	Ward.	Ward.	Ward.	Ward.	Ward.
8	Ward.	Ward.	Ward.	Ward.	Ward.	Ward.	Ward.
9	Ward.	Ward.	Ward.	Ward.	Ward.	Ward.	Ward.
10	Ward.	Ward.	Ward.	Ward.	Ward.	Ward.	Ward.
11	Ward.	Ward.	Ward.	Ward.	Ward.	Ward.	Ward.
12 m.	Dinner.	Dinner.	Dinner.	Dinner.	Dinner.	Dinner.	Dinner.
1 p. m.	Ward.	Ward.	Ward.	Ward.	Ward.	Ward.	Ward.
2	Ward.	Ward.	Ward.	Ward.	Ward.	Ward.	Ward.
3	Ward.	Ward.	Physiology.—H.	Anatomy.—C.	Ward.	Ward.	Clinical Instruction.—H.
4	Ward.	Ward.	Clinical Instruction.—H.	Clinical Instruction.—H.	Materia Medica.—H.	Medical Nursing.—H.	Ward.
5	Supper.	Supper.	Supper.	Supper.	Supper.	Supper.	Supper.
6	Ward	Ward.	Ward.	Ward.	Ward.	Ward.	Ward.

NOTE.—In the above Rosters, when not noted, it is to be understood that lectures begin with opening of term of Medical School, and continue until course of instruction is finished, or to end of term. H indicates Sealy Hospital as place of lectures; C, the College Building.

ROSTER OF WARD DUTIES AND INSTRUCTIONS—SENIOR CLASS OF NURSES, 1909-1910

Hours.	Sunday.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
7 a. m.	Ward.	Ward.	Ward.	Ward.	Ward.	Ward.	Ward.
8	Ward.	Care of the Eye.—H.	Clinical Pathology.	Ward.	Ward.	Diseases of the Ear, Nose, and Throat.	Ward.
9	Ward.	Ward.	Ward.	Ward.	Ward.	Ward.	Ward.
10	Ward.	Ward.	Ward.	Ward.	Ward.	Ward.	Ward.
11	Ward.	Ward.	Ward.	Ward.	Ward.	Ward.	Ward.
12 m.	Dinner.	Dinner.	Dinner.	Dinner.	Dinner.	Dinner.	Dinner.
1 p. m.	Ward.	Ward.	Ward.	Ward.	Ward.	Ward.	Ward.
2	Ward.	Cooking Class.	Ward.	Ward.	Ward.	Children's Diseases.	Ward.
3	Ward.			Ward.	Dietetics.—H.	Hygiene.—H.	
4	Ward.	Bandaging, Minor Surgery.—H.	Massage.—H.	Ward.	Clinical Instruction.—H.	Nervous and Mental Diseases, one-third term.	Massage.
5	Supper.	Supper.	Supper.	Supper.	Supper.	Supper.	Supper.
6	Ward.	Ward.	Ward.	Ward.	Ward.	Ward.	Ward.
7					Surgical Emergencies. H.	Obstetrics and Gynecology.—H.	

GRADUATES IN NURSING

At the Commencement Exercises held May 30, 1908, certificates of proficiency were awarded to the following members of the graduating class in the School of Nursing:

Baugh, Bula.
Berkshire, Anna Marie.
Blanar, Johanna Filipina.
Dickson, Matilda Inge.
Ender, Frieda.
Franks, Olga.
Houston, Alma Gertrude.
Neyland, Uvala May.
Smith, Lilas Beulah.
Tipton, Nancy Elizabeth.
Titsworth, Edna Alice.
Wheeler, Grace Enola.
Wood, Mary Gillam.
Yager, Catherine Louise.

The following members of the class attained honors by making 90 per cent or over in their examinations for the Senior Year: Misses Mary G. Wood, Bula Baugh, Frieda Ender, and Anna M. Berkshire.

NOTICE

Letters requesting information as to the curriculum of the School of Nursing, or applications for admission to the class, should be addressed to the Superintendent of Nurses, John Sealy Hospital, Galveston, Texas.

CATALOGUE OF STUDENTS IN THE DEPARTMENT OF MEDICINE, 1908-1909

SCHOOL OF MEDICINE

Freshmen

Name.	Home Address.
Acker, Earl	Lampasas, Texas.
Anderson, John Berwick	Waxahachie, Texas.
Allen, Edward Pennington	Eddy, Texas.
Atkinson, Roger	Gonzales, Texas.
Aves, Delano Richard	Seabrook, Texas.
Aves, Frederick Worley	Galveston, Texas.
Aydam, Charles Weiser	Houston, Texas.
Beckmann, Monroe Albert	Rowena, Texas.
Beers, Miss Dove	Galveston, Texas.
Bertner, Ernest William	Colorado, Texas.
Biron, Edward Paul	Galveston, Texas.
Black, Walter Alvin	Mt. Pleasant, Texas.
Brown, Hubert Lee	Hamilton, Texas.
Brownlee, Charles Hansford	Burnet, Texas.
Bruce, Byron Sanford (Ph. G., Univ. of Texas)	Denton, Texas.
Campbell, Clark C.	Itasca, Texas.
Clark, Floyd Elsworth	Atwell, Texas.
Colwick, James Thomas	Norse, Texas.
Connor, Paul James	Madisonville, Texas.
Cooke, Willard Richardson	Galveston, Texas.
Diaz, Joaquin Benitez	Linares, Mexico.
Donald, Homer (B. S., Westminster College)	Lewisville, Texas.
Downs, James Tickell	Dallas, Texas.
Eaton, Calvin Eli	Brownwood, Texas.
Edwards, Douglas Saunders	San Marcos, Texas.
Ellis, J. G., Jr	Denison, Texas.
Ellis, Leland C	Denison, Texas.
Falkenberg, Frederick Henry	Galveston, Texas.
Freundlich, Thomas	Houston, Texas.
Gibson, Joseph Herman	San Angelo, Texas.
Goode, John William	Plainview, Texas.

Name.	Home Address.
Goodwin, Roy Thaddeus	Moscow, Texas.
Gordon, Thomas Milar	Stephenville, Texas.
Graham, George Malcolm	Austin, Texas.
Graves, Joseph Henry	Waco, Texas.
Hampton, John Werton	Forreston, Texas.
Hargrove, Reuben Morgan	San Marcos, Texas.
Harzke, Otto Frederick	Ledbetter, Texas.
Hart, Edwin Thomas	Gordon, Texas.
Hasskarl, Robert Albert	Galveston, Texas.
Hinman, Alexander John	New Braunfels, Texas.
Hix, Ivan Edwards	Tyler, Texas.
Holland, William Harold	Jacksonville, Texas.
Howe, Miss Una (A. B., Univ. of Texas)	Douglassville, Texas.
Hurst, Vessie Reeves	Shelbyville, Texas.
Jackson, Albert Amza	Mexia, Texas.
Jackson, Reuben Wright	Mexia, Texas.
Johns, William Taylor	Galveston, Texas.
Johnson, Levy Stephen	Richmond, Texas.
Johnson, William Elijah	Cookville, Texas.
Jones, Edward Hallaran	Salado, Texas.
Kavanaugh, Bascom	Fairy, Texas.
Kennedy, Samuel	Grapeland, Texas.
Kitching, James Goodner	McKinney, Texas.
Lechenger, Gilbert Cecil	Houston, Texas.
Looney, Robert Hight	Duncanville, Texas.
McAdams, Frances May (B. S., Univ. of Texas)	Austin, Texas.
McBride, Robert Bartholow	Denton, Texas.
McCreight, William Francis	Quitman, Texas.
McCurtly, Carl	Chico, Texas.
McDonald, John Francis (B. A., Baylor Univ.)	Celeste, Texas.
McElhannon, Arthur Marcus	Belton, Texas.
Masters, Wallace Jefferson	Mt. Pleasant, Texas.
Mathews, Claude Armstrong	Austin, Texas.
Miller, Arthur Lee	Weimar, Texas.
Morris, Edwin Taylor	Bastrop, Texas.
Moth, Michael Victor	Galveston, Texas.
Neely, Jubal Allen	Denton, Texas.
Newton, Earl Homer (B. S., Southwestern Univ.)	Yancey, Texas.

Name.	Home Address.
Noll, Julius	Kerrville, Texas.
Outlaw, Ellery McRae	Palestine, Texas.
Perkins, Tillman Porcher	Carthage, Texas.
Pool, John Cyphus	Shive, Texas.
Powell, Eugene Vernon	Cleburne, Texas.
Queen, Dudley W.	Dalhart, Texas.
Smith, Benjamin Franklin	Hillsboro, Texas.
Steves, Ernest Jackson	San Antonio, Texas.
Stevenson, Charles W. (A. B., Univ. of Texas)	Floresville, Texas.
Talley, Oren Hubbell	Leesville, Texas.
Temple, Mrs. Ida May Shipman	Galveston, Texas.
Vaughan, Herbert Hope	Jonesville, Texas.
Wheeler, Le Roy Jasper	Galveston, Texas.
Whitten, Aldine Keiffer	Dublin, Texas.
Williams, Hillary Wingo	Fort Worth, Texas.
Wilson, Cliff Cicero	Gatesville, Texas.
Wilson, R. T., Jr	Gatesville, Texas.
Wilson, Rabun T.	Belton, Texas.
Witt, Guy Ferguson (B. S., Univ. of Texas)	Galveston, Texas.
Wooley, Talmage Oliver	Overton, Texas.
Wright, Ernest	Omaha, Texas.
Young, Claud Franklin	Bowie, Texas.
Young, Gail Sellers	Galveston, Texas.

Sophomores

Baldwin, Jack Browning	Karnack, Texas.
Beeson, Sam Pinckney	Lovelady, Texas.
Betts, Shirley Houston	Marshall, Texas.
Brindley, George Valter	Maypearl, Texas.
Campbell, George Perry	Douglas, Texas.
Castleberry, Girlie Gray	Ben Wheeler, Texas.
Chernosky, Amos William	Rosebud, Texas.
Cockrell, Christopher Columbus	Clarksville, Texas.
Collard, Felix Robert	Wheelock, Texas.
Currie, Benjamin Franklin	Burke, Texas.
Davis, Ralph Chain (Ph. G., Univ. of Texas)	Bonham, Texas.
Dickey, Robert Thomas	Winnsboro, Texas.
Edwards, Thomas Sydney	Blanco, Texas.
Fisher, William C., Jr	Galveston, Texas.

Name.	Home Address.
Flautt, Jesse Autry	Midland, Texas.
Flewellen, Wilbur D	Longview, Texas.
Hadley, Wilmer Amos	Webster, Texas.
Hopkins, Miss May Agnes (B. S., Univ. of Texas)	Austin, Texas.
Jamison, David Kincaid	Whitesboro, Texas.
Jinkins, Wiley Junior	Normangee, Texas.
Judge, Ivan Bonner	Tyler, Texas.
Kashkevich, John	Galveston, Texas.
Kindley, George Cyrus (B. S., Univ. of Texas)	Graham, Texas.
Kirkham, Harold L. D	Cuero, Texas.
Leap, Harry Leroy	San Antonio, Texas.
Lightsey, John Newton	Runge, Texas.
McAnulty, James Percy (A. B., Trinity Univ.)	Henderson, Texas.
McCall, Joseph Marion	Weatherford, Texas.
Mabry, Frank Dunn	Madisonville, Texas.
Moore, Oliver Lemon	Clarksville, Texas.
Montgomery, George L	Aquilla, Texas.
Murray, Robert Vincent	Austin, Texas.
Norwood, Eugene Phillips	Austin, Texas.
Perkins, Maury Johnson	Uvalde, Texas.
Pickard, Luther James	Weatherford, Texas.
Raney, Level William	Cushing, Texas.
Richardson, Arthur J	Kirbyville, Texas.
Richardson, Seborn Charles	Bessmay, Texas.
Scull, Charles E	Lavernia, Texas.
Shuddemagen, Miss Lily Clara (A. B., Univ. of Tex.)	Sabinal, Texas.
Spiller, William Fielding, Jr	Esperanze, Texas.
Streit, August	Brenham, Texas.
Sutton, Robert Spashe	Rusk, Texas.
Terrell, Truman Connor	Ranger, Texas.
Timmins, Oliver Hazard	Brownwood, Texas.
Turner, Ben Weems	Bourney, Texas.
Wright, John Vilas	Kirbyville, Texas.

Juniors

Bergfeld, Arthur W. C	Seguin, Texas.
Bradford, Charles Cabell	Mansfield, Texas.
Bryson, James Gordon	San Angelo, Texas.
Cavaness, Ernest Worth	Maypearl, Texas.

Name.	Home Address.
Eastland, Doyle Lee	Waco, Texas.
Edgerton, George William	Sherman, Texas.
Farmer, Robert Allen	Hanson, Texas.
Frobese, Joseph R	Cuero, Texas.
Gates, Charles Shackelford	Winchester, Texas.
Gilbert, Taylor Clyde	Grand Prairie, Texas.
Grice, Thomas Wyatt	Valley Mills, Texas.
Hall, Talbert Marion	Coryell, Texas.
Harper, Miss Mary Cleveland	San Antonio, Texas.
Hasskarl, Walter Frederick	Galveston, Texas.
Hoch, Charles Martin	Hochheim, Texas.
Holmes, Clarence Augustus	Hamilton, Texas.
Key, Sam Newton	Austin, Texas.
Kubala, Stephen Francis	Beeville, Texas.
Lee, Quincy Brown	Munday, Texas.
Lynch, Kenneth	Hamilton, Texas.
McMurray, William Milton	Shiner, Texas.
Mangum, Thomas Emmett	Mason, Texas.
Mikeska, Edward Francis	Nelsonville, Texas.
Ogilvie, Henry Houston	Melissa, Texas.
Payne, Thomas Edgar	Scranton, Texas.
Shanks, Robert Cornelius	Shanks, Texas.
Shaw, Thad (B. A., Univ. of Texas)	Galveston, Texas.
Sheats, Arthur Carlton	Carleton, Texas.
Shipman, Edward D	San Angelo, Texas.
Singleton, Albert Olin (B. S., Univ. of Texas)	Waxahachie, Texas.
Smith, Coalie Fro	Seguin, Texas.
Terrell, Caleb Odhelious	Ranger, Texas.
Thorne, John H	Galveston, Texas.
Thrasher, Benjamin Oscar	Gainesville, Texas.
Warren, William Henry	Center, Texas.

Seniors

Badt, Morrison Bejamin	Mt. Pleasant, Texas.
Boerner, Morris Hirshfield	Austin, Texas.
Brown, Lovell Columbus	Hamilton, Texas.
Cade, Charles Craig	San Antonio, Texas.
Cain, William Roy	Tyler, Texas.
Callaway, Emmett E	Joshua, Texas.

Name.	Home Address.
Cline, Raoul Rene Daniel (B. S., A. M., Ph. G.)	Galveston, Texas.
Collins, Jasper Sylvester	Cook's Point, Texas.
Crumpler, Walter Emmett	Spurger, Texas.
Cotham, Christian Malford	Burnet, Texas.
Cummings, William J	Cleburne, Texas.
Dunning, William Townsend	Gonzales, Texas.
Dupree, Wilbur Abney	San Angelo, Texas.
Ferrell, Hubert	Tyler, Texas.
Fortson, John Lake	Marshall, Texas.
Franklin, James William	San Antonio, Texas.
Garrett, Henry Spurge	Bluffton, Texas.
Glover, George Edward	Palestine, Texas.
Hill, Charles Cummings	Denton, Texas.
Hoecker, Wade Lee	Galveston, Texas.
Key, Harry H	Joplin, Texas.
Lancaster, Edgar Henry	Austin, Texas.
Logue, Lyle James	Columbus, Texas.
McKnight, William Cosby	Hamilton, Texas.
Odom, James Anderson	Rogers, Texas.
Paine, Liston	Galveston, Texas.
Peter, Leopold Joseph	Schulenburg, Texas.
Richards, William Franklin	Evant, Texas.
Ross, Albertus	Carthage, Texas.
Schilling, John Gaillard	Cedar Bayou, Texas.
Sherrin, Miss Jennie A	Galveston, Texas.
Smith, Benjamin Clinton	Brandon, Texas.
Smith, Cecil Zaccheus	Anna, Texas.
Swearingen, Mercer	Warren, Texas.
Vaughan, John Herschel	Liberty Hill, Texas.
Williamson, Drue Baldwin	Willis, Texas.

Special

Tindall, Dr. Charles H. (M. D., Grant Univ.)	Appleby, Texas.

SCHOOL OF PHARMACY

Juniors

Adams, Samuel Bruce	Emory, Texas.
Albert, William Frederick	Oakland, Texas.
Arnett, William Dudley	Colorado, Texas.

Name.	Home Address.
Bass, Everett William	Dalhart, Texas.
Carsner, Roper Sangster	Victoria, Texas.
Chernosky, Adolph Albert	Rosebud, Texas.
Clark, Balfour Haynie	Rice, Texas.
Crofts, Cyril Ernest	Galveston, Texas.
Douglas, Miss Fan	Bellevue, Texas.
Gatling, John Massey	San Augustine, Texas.
Gentry, Thomas Marion	Big Springs, Texas.
Haggard, Frank Nicholas	Hillsboro, Texas.
Heineke, Frederick	Brenham, Texas.
Henegar, Eugene Long	Gordon, Texas.
Jackson, Bruce Edward	Franklin, Texas.
Kavanaugh, Mrs. Elma Nevada	Fairy, Texas.
LeMay, Ernest Grepin	Crockett, Texas.
Little, Miss Fletcher Flint	Hughes Springs, Texas.
Locke, Louis Edward	Bryan, Texas.
*Lott, Martin Kenney	El Paso, Texas.
McCartney, Miss Marie Beatrice	San Angelo, Texas.
Mackey, Gordon	Lampasas, Texas.
Mallow, Luther Forest	McKinney, Texas.
Maris, John Prior	Franklin, Texas.
Matlage, Willie Theodore	Rosenberg, Texas.
Meador, Thomas Van	San Saba, Texas.
Murphy, Robert Oliver	Paris, Texas.
North, Thomas Murphree	Yoakum, Texas.
Odom, Scott Gregg	Rogers, Texas.
Oxford, Thomas David	Turnersville, Texas.
Payne, Claiborne Vinson	San Angelo, Texas.
Pfeuffer, Miss Ida Francis	Kerrville, Texas.
Reuss, Edward Mügge	Cuero, Texas.
Richardson, Swan Edward	Stephenville, Texas.
Roerner, Preston Oscar	Port Lavaca, Texas.
Rogers, Willoughby Eugene	Bremond, Texas.
Russell, Edward	San Antonio, Texas.
Shaw, Geoffrey William	Wichita Falls, Texas.
Sloan, Percy Abbott	Bay City, Texas.
Smith, Walter Carl	Weatherford, Texas.

*Deceased.

Name.	Home Address.
Sparkman, John Thomas	Alvord, Texas.
Voelcker, Julius Grube	New Braunfels, Texas.
Widerstrom, Frank Edward	Austin, Texas.
Wilder, Claude Lawrence	Whitt, Texas.

Seniors

Caldwell, Clifton Reedy	Henrietta, Texas.
Chapman, Earl Olgus	Sulphur Springs, Texas.
Figley, Ward C.	La Porte, Texas.
Harris, Jared J.	Hutto, Texas.
Hoover, Lon Mabry	Pontotoc, Texas.
McAdams, Miss Rosalie	Austin, Texas.
McKinney, Vernon Vane	Corsicana, Texas.
Schaefer, Miss Elfrieda Carrie	San Antonio, Texas.
Schaefer, Miss Laura	San Antonio, Texas.
Thompson, Robert Luther	Uvalde, Texas.
Wheat, Cicero Lafayette	Huckabay, Texas.

Special

Crawford, Miss Mabel	Ganado, Texas.

SCHOOL OF NURSING

Seniors

Barrett, Miss Elizabeth	Galveston, Texas.
Bricker, Miss Hilma Marie	Crockett, Texas.
Fuglesang, Miss Christina Rose	Dannerang, Texas.
Glenn, Miss Mae Bell	Miami, Texas.
Hardin, Miss Lena Annie Amelia	Fort Worth, Texas.
Perkins, Miss Margaretta	Comanche, Texas.
Pfeifer, Miss Edna Anna	Galveston, Texas.
Robbins, Miss Helen Delano	Corsicana, Texas.
Sedgwick, Mrs. Hilma Matilda	Galveston, Texas.
Spiller, Miss Samuella	Austin, Texas.
Sterling, Miss Mary Amanda	Hempstead, Texas.
Tompkins, Miss Cora Lee	Princeton, Texas.
Walford, Miss Lizzie Rose	Dallas, Texas.
Whiteside, Miss Lula Olove	Fort Worth, Texas.

Intermediate Class

Name.	Home Address.
Krebs, Miss Daisy Elizabeth	Texas City, Texas.

Juniors

Bell, Mrs. Mary	Hillsboro, Texas.
Farmer, Mrs. Nancy Smith	Sherman, Texas.
Gosney, Miss Mattie Drucilla	Fort Worth, Texas.
Greer, Miss Annie Lou	Anna, Texas.
Hall, Miss Della	McGregor, Texas.
Heath, Miss Sophie Robinson	Pittsburg, Texas.
Henderson, Miss Audrey Olena	McKinney, Texas.
Hunnicutt, Miss Elizabeth Hargrave	Belton, Texas.
Knight, Miss Mary Emily	Lampasas, Texas.
Morgan, Miss Lizzie	Timpson, Texas.
Raney, Miss Ola	Belton, Texas.
Riley, Miss Jennie	Leonard, Texas.
Sellman, Miss Emily	Rochelle, Texas.
Tiedemann, Mrs. Augusta	Junction City, Kan.
Tipton, Miss Katherine	Nacogdoches, Texas.
White, Miss Ella R.	Cuero, Texas.
Wingo, Miss Laura Eunice	Ada, Okla.
Wright, Miss Nellie Pearl	Powell, Texas.

SUMMARY OF STUDENTS IN THE UNIVERSITY OF TEXAS, 1908-1909

THE COLLEGE OF ARTS:		
Graduates	37	
Seniors	107	
Juniors	132	
Sophomores	197	
Freshmen	361	
Specials	68	
Total		902
DEPARTMENT OF EDUCATION:		
Graduates	7	
Seniors	56	
Juniors	60	
Sophomores	22	
Freshmen	34	
Total		179
DEPARTMENT OF ENGINEERING:		
Seniors	33	
Juniors	45	
Sophomores	107	
Freshmen	83	
Specials	7	
Total		275
DEPARTMENT OF LAW:		
Seniors	64	
Middlers	95	
Juniors	229	
Total		388
Total in Main University, regular session		1744
Names counted twice		212
Net total in Main University, regular session		1532

DEPARTMENT OF MEDICINE:

School of Medicine		
Seniors	36	
Juniors	35	
Sophomores	47	
Freshmen	92	
Specials	1	
Total		211
School of Pharmacy		
Seniors	11	
Juniors	44	
Specials	1	
Total		56
School of Nursing		
Seniors	14	
Intermediates	1	
Juniors	18	
Total		33
Total in Department of Medicine		300
Net total in the University, regular session		1832
SUMMER SCHOOLS, net total		741
Grand total		2573

ATTENDANCE BY YEARS

1883-84	221	1896-97	751
1884-85	209	1897-98	800
1885-86	199	1898-99	986
1886-87	245	1899-00	1,041
1887-88	250	1900-01	1,121
1888-89	278	1901-02	1,291
1889-90	309	1902-03	1,348
1890-91	283	1903-04	1,353
1891-92	388	1904-05	1,486
1892-93	353	1905-06	1,991
1893-94	482	1906-07	2,273
1894-95	630	1907-08	2,462
1895-96	730	1908-09	2,573

APPENDIX

A. ADMISSION REQUIREMENTS

DETAILS INDICATING NATURE AND SCOPE

Botany*

Students who offer one unit in Botany for the entrance requirement in Natural Science should present evidence of having satisfactorily completed the *equivalent* of at least one year's work of not less than forty-five minutes daily. Where five periods a week with an hour of preparation for each are demanded for other studies, Botany should receive the equivalent of two recitation periods with their preparation, together with three *double* (not six separated) periods of laboratory work. The applicant will be required to present a well kept set of his own notes and drawings covering the subjects of laboratory and field study.

Detailed information as to the scope of the year's work in Botany advised for High Schools will be given in a special circular which is in preparation. This circular will replace the recommendations for Botany given in the *High School Bulletin* of the University of Texas. In the new circular the following recommendations will be made:

The work in Botany should consist of: A. Anatomy and Morphology; B. Physiology and Ecology; C. The Natural History of the Plant Groups, and Classification. One-fourth

*The recommendations for Botany are based on the report of the committee on Education of the Botanical Society of America, in Publication 35 of that society, or in *School Review* for November, 1908, pp. 594-600.

of the time might be spent on A, one-fourth on B, and one-half on C.

A. Anatomy and Morphology.—This should include the study of the seed, the shoot, the root, the flower, and the fruit, emphasizing, in each case, gross morphology, structure, and function. The cell and plant tissues should receive consideration as the work progresses.

B. Physiology and Ecology.—This should include the rôle of water in the plant, photosynthesis and light relations of leaves and other green tissue, respiration, digestion, growth, irritability, and reproduction, both sexual and asexual. Dissemination of seeds, cross pollination, plant societies, and the different types of nutrition should also be considered. Some of the physiological and ecological topics may be studied in connection with A, while others can best be reserved for consideration with C.

C. The Natural History of the Plant Groups.—This should include the study of the structure, reproduction, and adaptations to habitat of one or two types from each of the following groups: Algae, Fungi, Lichens, Mosses and Liverworts, Ferns and their Allies, Gymnosperms, and Angiosperms, with greater emphasis upon the higher and more conspicuous forms. Representative types of the principal families of Angiosperms should be studied. Herbarium work should be made voluntary, and the ability to use manuals for the determination of species is considered desirable but not essential.

Chemistry

For one unit in Chemistry there is required the one-year course outlined in the "Special Report of the Committee on Chemistry presented to the Committee on College Entrance Requirements of the National Educational Association," a portion of which report here follows:

"The following outline includes only the indispensable things which must be studied in the class-room and laboratory. The material is, for the most part, common to all elementary text-books and laboratory manuals. Each book makes its own selections of facts beyond this which may be necessary for the illustration of the principles of the science. The order of presentation will naturally be determined by each teacher for himself.

"*Outline.*—The chief physical and chemical characteristics, the preparation and the recognition of the following elements and their chief compounds: *oxygen, hydrogen, carbon, nitrogen, chlorine, bromine, iodine,* fluorine, *sulphur,* phosphorus, *silicon,* potassium, *sodium,* calcium, magnesium, *zinc,* copper, mercury, sliver, aluminum, *lead,* tin, *iron,* manganese, chronium.

"More detailed study should be confined to the italicized *elements* (as such) and to a restricted list of compounds, such as: water, hydrochloric acid, carbon-monoxide, carbon-dioxide, nitric acid, ammonia, sulphur-dioxide, sulphuric acid, hydrogen-sulphide, sodium-hydroxide.

"Attention should be given to the atmosphere (constitution and relation to animal and vegetable life), flames, acids, bases, salts, oxidation and reduction, crystallization, manufacturing processes, familiar substances (illuminating gas, explosives, baking powder, mortar, glass, metallurgy, steel, common alloys, porcelain, soap); combining proportions by weight and volume, calculations founded on these and Boyle's and Charles' laws; symbols and nomenclature (with careful avoidance of special stress, since these are non-essential); atomic theory, atomic weights and valency in a very elementary way; nascent state; natural grouping of the elements; solution (solvents and solubility of gases, liquids, and solids, saturation); ionization; mass action and equilibrium; strength (= activity) of acids and bases; conservation and dissipation of energy; chemical energy (very elementary); electrolysis. Chemical terms should be defined and explained, and the pupil should be able to illustrate and apply the ideas they embody. The theoretical topics are not intended to form separate subjects of study, but to be taught only so far as is necessary for the correlation and explanation of the experimental facts.

"The facts should be given as examples from various classes, and not as isolated things. Thus to speak of a 'standard method of preparing hydrogen,' whereby the action of zinc on hydrochloric acid is meant, shows narrow and infertile teaching. It should be shown that all acids are acted upon by a certain class of metals to produce hydrogen. Examples of both classes of metals should be given and the general principles derived. The reason for using zinc and hydrochloric acid in the laboratory can then be stated."

A note-book containing a complete record of the experiments he has performed, and certified by the teacher, must

be presented at entrance by the candidate. The note-book must bear evidence that the candidate has formed the habit of keeping an intelligible record of laboratory work extending through the entire series of experiments performed.

Of first and by far the greatest importance are the qualifications and capacity of the teacher; next, adequate laboratory equipment; and, lastly, modern text-books, among which may be mentioned: Newell's *Descriptive Chemistry with Experiments* (D. C. Heath & Co.), Remsen's *An Introduction to the Study of Chemistry* (Holt & Co.), and Hessler and Smith's *Essentials of Chemistry* (Sanborn & Co.). Others might be serviceable.

For fuller information, see the *High School Bulletin* published by the Committee on Affiliated Schools of the University of Texas.

Civics

One-half of a unit for admission may be presented in Civics. For preparation may be used the text by Townes, or by Thorpe and Garrison, or by Fradenburg and Garrison.

English

For the prescribed three units in English, candidates will be examined upon their knowledge of the elements of English Grammar and of English Composition, and especially upon their ability to write simple, idiomatic English properly spelled, punctuated, and paragraphed. The subjects for such writing will be taken from the books named below for the respective year, with whose language, form, and subject-matter the candidate must be familiar.

For 1909 the books are Shakespeare's *Macbeth;* Milton's *Minor Poems;* Goldsmith's *The Deserted Village* and *The Vicar of Wakefield;* Coleridge's *The Ancient Mariner;*

Dickens's *A Tale of Two Cities;* Franklin's *Autobiography;* and Irving's *The Sketch Book.*

For 1910 the books are Shakespeare's *The Merchant of Venice;* Macaulay's *Essay on Johnson;* Addison's *The Sir Roger de Coverley Papers;* Goldsmith's *The Deserted Village;* Scott's *Quentin Durward* and *The Lady of the Lake;* De Quincey's *Joan of Arc* and *The English Mail-Coach;* and Poe's *Poems.*

For 1911 the books are Shakespeare's *Julius Caesar;* Carlyle's *Essay on Burns;* Palgrave's *Golden Treasury,* First Series; Bunyan's *Pilgrim's Progress,* Part I; Hawthorne's *The House of the Seven Gables;* Irving's *The Sketch Book;* Macaulay's *The Lays of Ancient Rome;* and Lowell's *The Vision of Sir Launfal.*

For four units in English, candidates must, in addition to the foregoing, stand a second examination. For the years 1909 and 1910 this examination will consist of questions upon English Grammar, English Composition, and the History of English Literature, and of brief essays upon some of the following works: Shakespeare's *A Midsummer Night's Dream;* Tennyson's *Idylls of the King;* Palgrave's *Golden Treasury,* Second Series; Macaulay's *Essays on Milton and Addison;* Burke's *Speech on Conciliation with America;* Thackeray's *Henry Esmond;* and Dickens's *David Copperfield.*

French

To absolve the minimum entrance requirement of two units in French, candidates will be examined in grammar, reading, and pronunciation. They will be expected to know the elements of grammar, about the equivalent of the first 175 pages of Fraser and Squair's *French Grammar* (Heath), not including the less important irregular verbs, or prefer-

ably, of Downer's *First French Book* (Appleton). In preparing for this examination, special stress should be laid on the inflection of verbs; on the rules for the plural of nouns, and for the plural and feminine of adjectives; on the use of personal, demonstrative, relative, and interrogative pronouns, and of the partitive and generic articles; on hyphenation; on word-order in interrogative sentences; on elision; on the use of accents; and on the use of auxiliary verbs. Students are expected to show careful drill in the construction of easy French sentences, and the drill should be largely oral. They will be expected to have read from 400 to 450 pages of French, preferably modern short stories, novels, or plays.

To absolve the entrance requirement of three units, students will be expected to have read about 700 pages of French, and to show some familiarity with the most important facts of French grammar, as presented, for example, in the second part of Fraser and Squair's *French Grammar.*

German

The requirement of two units in German demands a knowledge of reading, grammar, pronunciation, and a command of a vocabulary sufficient for easy conversation. The reading will include simple German prose (Guerber's *Märchen und Erzählungen,* I. and II., Huss's *German Reader,* and easy stories such as are contained in *Edelstein, Stille Wasser,* etc.), from 225 to 275 pages. Reading of simple German at sight will be expected. The grammar will embrace the conjugation of the weak and strong verbs and the modal auxiliaries; the declension of nouns, adjectives, articles, pronouns; the prepositions with their cases; idiomatic expressions; the elements of syntax, especially the order of words, and the construction of verbs like *gelingen, geschehen, gefallen,* etc.; the use of modal auxiliaries, the passive voice,

the reflective verbs, the impersonal verbs, the separable and inseparable compound verbs; ability to write simple German sentences.

In order to be granted credit for three units in German the applicant will be required, in addition to the foregoing, to pass an examination on the second part of Thomas's *German Grammar* (pp. 185-326 inclusive), or its equivalent, and on Storm's *Immensee;* Goethe's *Sesenheim,* and either Lessing's *Minna von Barnhelm* or Schiller's *Wilhelm Tell.*

Greek

To enter the Freshman class (Course 1), which carries a credit of two units, the candidate should have studied Greek two years of five class-periods a week. The examination will include, in grammar, questions on the ordinary inflections and constructions; in reading, the translation (1) of passages taken from the first three books of Xenophon's *Anabasis,* and (2) a piece of easy prose at sight; in composition, the writing of simple Greek sentences. An accurate and ready knowledge of the common forms and constructions is of the highest importance. In translation, the candidate should use simple, idiomatic English. In preparation for this examination the pupil should be given constant training in the way to approach the meaning of the Greek. Thorough understanding of a passage should be insisted on before translation is attempted. Practice in reading aloud is of great value, the Greek being pronounced carefully, according to the accents, with effort after expression.

To obtain credit for three units in Greek, the work of the student should extend over one year in addition to that prescribed for the Freshman course. It should cover a fourth book of Xenophon and the first three books of the *Iliad,* or

their equivalent, with a correspondingly more advanced study of syntax and composition.

History

The admission requirements in History may be satisfied by any two of the following units:

1 in Ancient History (up to 800 A. D.).

1 in Mediaeval and Modern History (from 800 A. D.).

1 in English History.

1 in American History.

As many as four of these units may be presented.

The preparation should include some collateral work, which ought to be partly in an elementary source-book. The examination in any of these subjects will include the drawing of epoch maps. For Ancient and Modern History the ground that should be covered for preparation may be indicated by Myers's or West's texts; for English History, by Terry's *History of England for Schools;* and for American History, by Montgomery's *Student's American History.*

Latin

For three entrance units in Latin the examination will embrace the following topics, *and it is understood that the course of study herein described is binding on the affiliated schools also.*

1. GRAMMAR. (a) Forms: the regular forms of nouns, adjectives, and adverbs (comparison), and verbs, including the principal parts and the tense systems formed from them. (b) Syntax: test-questions will call for the change of Latin phrases from active to passive; for the commoner case and mood constructions involved in words to be selected from the passages set for translation; for the commoner uses of prepositions and governing conjunctions.

Much time should be spent on forms and constructions.

2. Prose Composition. Translation of easy English sentences into Latin, and the change of a passage from direct to indirect discourse, or conversely.

Latin Prose Composition should be studied for about two years, with one written exercise each week, carefully corrected by the teacher.

Our Freshmen are particularly deficient in composition.

3. Latin Prose Authors. To prepare for this part of the examination the following course is laid down: (a) some 70 pages of Caesar's *Gallic War* (as much as Books I-III, entire); (2) Cicero's oration *Pro Lege Manilia,* with enough more to make up 50 pages (the amount of the four Catilines).—The entire amount of prose required is 120 pages; the half or less of this amount may be taken from Sallust or Livy, but in no case should *Pro Lege Manilia* be omitted.

Students are requested to bring their own dictionaries (or vocabularies) to the examination.

4. Latin Poetry. Virgil's *Aeneid,* Book I.

5. Scansion of the dactylic hexameter.

6. Geography, History, Biography,—general questions adapted to the matter contained in the standard school editions of Caesar, Cicero, Virgil.

For four entrance units in Latin, in addition to all the above, there will be required extensions for Cicero and Virgil, as follows: Cicero, *Pro Lege Manilia,* the four *Catilines, Pro Archia;* Virgil, the *Aeneid,* four to six books.

Mathematics

For admission to the University three units are prescribed in Mathematics (Algebra, $1\frac{1}{2}$; Plane Geometry, $1\frac{1}{2}$). An elective half-unit may be offered both in Solid Geometry and in Trigonometry.

A. Arithmetic.

While the University of Texas does not require a formal examination in Arithmetic, it is, of course, difficult for a student to take successfully any of the mathematical courses offered here without a sound knowledge of this subject. What is desirable is the power to analyze accurately original problems of moderate difficulty independently of formal rules, and the ability to perform the requisite numerical operations neatly, rapidly, and *accurately.*

The metric system should be taught thoroughly and independently of any of the other so-called systems. Much time can be wasted on the details of commercial arithmetic and in memorizing numerous tables of weights and measures.

Many problems that properly belong to Algebra are often solved by Arithmetic.

B. Algebra ($1\frac{1}{2}$ *units*).

Facility and accuracy in factoring, in the reduction of fractional forms, with the ability to handle expressions involving fractional indices and radical signs, are the foundation for any attainment in Algebra. This is what may be called the calculation side. Good results can only be obtained here by abundant drill, both written and oral. The students should be able to find Highest Common Factor and Lowest Common Multiple of factorable expressions by the factor method; should be able to form and solve simple equations of the first degree in one, two, three unknowns; should be able to solve any quadratic, and determine, on *inspection,* the sum and product of the roots as well as decide concerning their reality; or, if the roots of the quadratics are given, should be able to write down the quadratic satisfied by them.

Since Algebraic expressions represent certain Arithmetic

operations to be performed on certain numbers usually represented by letters, the student should be able to determine when these operations are possible, and should be taught frequently to test his calculation by substituting particular numbers for the letters involved. Students are prone to make erroneous inductions unwarranted by any principles of calculation. Faults of this sort should be drastically penalized, and the student should be taught to avoid them by checking his results by replacing the letters by particular numbers. The difference between identities and equations should be familiar, and the *equivalence* of equations should receive careful attention.

Such topics as Undetermined Coefficients and the Binomial Theorem, except for positive integral exponents, should be excluded from any high-school course. The above requirements are fairly represented by the first twenty chapters of Wentworth's *Elementary Algebra,* ed. of 1906, or by the first fourteen chapters of Beman and Smith's *Elements of Algebra,* together with pp. 390-4 of the appendix.

C. Plane Geometry ($1\frac{1}{2}$ *units*).

For entrance the University requires a detailed knowledge of the most important theorems of the first five books. This implies a precise knowledge of the definitions of the fundamental geometrical figures and concepts, such as angle, circle, polygon, congruence, length, area, equivalence, locus, etc., and an appreciation of the nature of a geometrical *proof.* The structure of various types of proofs should be understood, *i. e.,* the usual procedure in a superposition proof, an indirect proof, or a locus proof. The comprehension of such proof is greatly facilitated by separating the proof into its various steps, each step characterized by a citation to a defi-

nition, an axiom, a previous theorem, or a part of the hypothesis.

In the teaching of Deductive Geometry a most valuable auxiliary is the judicious use of a well-arranged set of original exercises. The teacher should point out the principles which guide in the selection of proper auxiliary constructions, and should lead the student to find such construction for himself by a process of intelligent experiment.

With average students much better results are secured if the Deductive Geometry be preceded by a few months' work in Concrete Geometry, where the pupils get clear and concrete notions of the fundamental figures and concepts of geometry by drawing, paper-folding, and measurement. A great many pupils fail to learn geometry because they have no clear notion of what the technical terms of this subject mean. It is in clarifying such notions that the Concrete Geometry is most useful.

Physics

For one unit in Physics the candidate is required to pass a written examination covering the text-book studied. Simple numerical problems may be included. The examination questions will be selected in agreement with the following text-books: Carhart and Chute's *High-School Physics* (Allyn & Bacon); Crew's *Elements of Physics* (The Macmillan Co.); Hoadley's *Brief Course in Physics* (American Book Company); Milliken and Gale's *First Course in Physics* (Ginn & Co.).

The candidate is also required to present, at the hour of examination, a note-book containing, in full, the data and results of at least thirty-five laboratory exercises selected from the list given in the *High School Bulletin* published by the University.

The note-book must bear the written endorsement of the teacher that the notes are a record of the student's own work as done in the laboratory. It should also contain an index of the exercises which are described. At least ten of the exercises must be selected in mechanics and hydrostatics, and each of the other divisions (heat, sound, light, and electricity with magnetism) must be represented by at least three. Experience has shown that the observations as made by the student in the laboratory can be so recorded at the time as to render any copying wholly unnecessary, and, in general, this should be insisted on. Special weight will be given to the note-book in estimating the candidate's attainments as indicating the thoroughness of his preparation and his ability properly to record observations made and to interpret the same.

Graduates of schools affiliated in Physics will, of course, not be required to pass the written examination, but all students who desire entrance credit in Physics are expected to present their laboratory note-books when seeking admission to the University.

For full information concerning the character of the course of instruction necessary to fulfill these requirements reference should be had to the above-mentioned bulletin.

Physiography

The Physical Geography offered to absolve the entrance requirement of a half-unit should be something more than the memorizing of a text; it should include a personal familiarity with maps and map-making and an ability to recognize and explain the more common phenomena with which we are brought in daily contact. Maury-Simonds's *Physical Geography* (American Book Company), Davis's *Elementary Physical Geography* (Ginn & Co.), Gilbert and Brigham's *Intro-*

duction to Physical Geography (D. Appleton & Co.), Fairbanks's *Practical Physiography* (Allyn & Bacon), and Tarr's *New Physical Geography,* 1904 (The Macmillan Company), are recommended as texts, and will serve to indicate the ground to be covered. For laboratory practice the starred exercises in Everly, Blount, and Walton's *Laboratory Lessons in Physical Geography* (American Book Company) are recommended, but equivalent exercises from Darling's *Laboratory Manual in Physical Geography* (Atkinson, Mentzer, & Grover) or Trafton's *Laboratory and Field Exercises in Physical Geography* (Ginn & Co.) may be offered. In addition the student should be well informed concerning the geography of this State. To this end a work has been especially prepared, Simonds's *Geography of Texas: Physical and Political* (Ginn & Company), which should be studied upon the completion of one of the above-mentioned books.

In order that an estimate may be made of the student's training, note-books should be submitted as evidence of the manner in which the topics assigned by the teachers have been developed.

Physiology

Mere book-work in Physiology will *not* absolve the requirement in this subject. The candidate must have pursued the study of Anatomy, Physiology, and Hygiene as outlined in Colton's *Physiology, Experimental and Descriptive,* or in Martin's *The Human Body, Briefer Course,* fifth edition, revised by G. W. Fitz, M. D.

A note-book containing a complete record of the experiments he has performed, and certified by the teacher, must be presented at entrance by the candidate.

Spanish

To satisfy the minimum entrance requirement of two units in Spanish, the candidate must present the equivalent of Garner's or Hills and Ford's *Spanish Grammar, i. e.,* he must prove his familiarity with the principles of elementary Spanish grammar, with stress laid on the verbs, the use of the pronouns and of reflexive and prepositional constructions, and the chief uses of the subjunctive. In addition, he must present from 400 to 450 pages of reading, preferably short stories, novels, and plays by good modern authors; he must prove his ability to read fairly difficult Spanish at sight, to write reproductions of easy passages in Spanish, and to do easy translation work into Spanish. He should also have acquired a fairly good pronunciation.

To absolve the entrance requirements of three units, students will be expected to have read about 700 pages of Spanish and to show some familiarity with the most important facts of Spanish grammar, as presented, for example, in Ramsey's *Spanish Grammar.*

Zoology

One full year's work is required, of which at least one-half should be devoted to the study of specimens (living as far as possible) in the laboratory or in the field. Careful, well labeled drawings of all forms studied must be made, and these drawings should be accompanied by written notes descriptive of the observations made by the student. Text-book knowledge should never be embodied in student notes. Only native animals should be used in the laboratory, as the examination of preserved specimens unaccompanied by living specimens is far from enlightening to elementary students. It is suggested that only a few periods be spent in the exami-

nation of protozoa, and that the arthropoda (especially the insects) be emphasized.

Students will be admitted only after presenting a satisfactory laboratory note-book, certified by the teacher.

Teachers desirous of advice about text-books or laboratory apparatus will please communicate with the Professor of Zoology at the University.

SPECIMENS OF ENTRANCE EXAMINATIONS

Specimen Examination in Botany (1 unit)

1. Name the different kinds of roots, and tell how each performs the work of absorption.

2. Characterize five different types of plant nutrition, and give examples illustrating each.

3. Describe several different types of modified stems, and indicate the function which they perform.

4. Illustrate the structure of an herbaceous stem by a diagram, and name all the parts. Illustrate the structure of a woody stem in a similar way.

5. What are the principal functions which leaves perform? Give a brief statement in regard to photosynthesis, and tell why it is of value to the green plant.

6. Illustrate a typical flower by means of a diagrammatic longitudinal section, and name all the parts.

7. Name two different ways in which flowers are pollinated, and give examples. Describe the difference between pollination and fertilization.

8. Name five different kinds of fruits, give examples, and tell how they differ in structure.

9. Give a brief characterization of the following groups of plants: algae, fungi, mosses, ferns, and flowering plants.

10. Define the following: transpiration, respiration, spore, seed, ovule, ovary, habitat, inflorescence, pollen, protoplasm.

Specimen Examination in Chemistry (1 unit)

Candidates should answer any *five,* and only five, whole *numbered* questions under A, and any three under B.

A.

1. (a) Mention three substances which on heating give oxygen.

(b) Give the equations which represent the quantitative relations in each case.

(c) Calculate how much of each one of the substances must be used to yield five grams of oxygen.

(d) What two substances are ordinarily mixed to prepare oxygen in the laboratory?

(e) What advantage results from mixing them, and what equation represents the action that takes place in the mixture?

2. (a) Mention two metals either one of which reacts with either one of two acids (also to be mentioned) to form hydrogen, and give the four equations possible.

(b) Summarize the properties of hydrogen.

(c) Mention three salts any one of which with any one of two acids (also to be mentioned) will react to form hydrogen chloride.

(d) Give the equation for the reaction of one mixture.

(e) How many grams of hydrogen chloride may be obtained by using five grams of salt as per equation to be given under (d)?

3. (a) Calculate the weight in grams of the oxygen in 650 cc. of oxygen gas at 20 degrees C. and 750 mm. pressure, saturated with moisture (aqueous vapor tension equal 22 mm.), if one liter of dry ogygen gas at 0 degrees C. and 760 mm. weighs 1.4 grams.

(b) What volume will the hydrogen that may be obtained from 2 grams of zinc occupy at 15 degrees C. and 750 mm. if one liter of hydrogen at 0 degrees C. and 760 mm. weighs 0.09 grams?

NOTE.—In the foregoing problems, all multiplications and divisions may be omitted, and the answers may be given in factors. In the gas-volume corrections, fundamental laws must be applied: the use of a special formula will not be permitted.

4. (a) Dilute sulphuric acid is added to sodium hydroxide solution in the following proportions:

(1) $2NaOH : 1H_2SO_4$;
(2) $1NaOH : 1H_2SO_4$;
(3) $1NaOH : 2H_2SO_4$;

what does each solution contain after mixing?

(b) Sodium acid carbonate is also called sodium bicarbonate: show definitely the origin of the name.

(c) What is the commercial source of sulphur? State how it is extracted and purified.

(d) What is the commercial source of ammonia? How may the gas be liberated from its salts? Give equation for one such reaction mixture. Point out a similarity between this reaction and the preparation of hydrogen chloride.

5. (a) Give in proper arrangement the group of the periodic system of elements of which copper and potassium are members.

(b) What is the position of aluminium in the periodic system? How does this agree with its valence?

(c) Give directions for changing the aluminium in aluminium sulphate completely into aluminium chloride, so as to obtain the latter pure.

(d) Give directions for changing the copper in cupric

chloride completely to cupric nitrate so as to obtain the latter pure.

6. Give the equations for those of the following mixtures which actually react when mixed:

(a) Calcium oxide and water;
(b) Copper oxide and water;
(c) Sulphur trioxide and water;
(d) Silica and water;
(e) Copper oxide and nitric acid;
(f) Aluminium hydroxide and sulphuric acid;
(g) Calcium chloride and sodium carbonate solutions;
(h) Hydrochloric acid and calcium carbonate;
(i) Barium chloride solution and dilute sulphuric acid;
(j) Ammonium chloride and potassium hydroxide solution.

B.

7. Present fully all facts and considerations necessary to reach the conclusion that the molecule of hydrogen contains at least *two* atoms.

8. State the facts (in the form of general laws) which chemists sought to explain by assuming matter to be composed of atoms.

9. (a) Point out the essential difference exhibited by two substances when (1) merely mixed, (2) chemically combined.

(b) Give in outline either the Morley or the Dumas method for determining the relative combining weights of oxygen and hydrogen.

10. A gas which is a compound of nitrogen and oxygen in the ratio by weight of 7:16, has a specific gravity of 23 (compared with the weight of an equal volume of hydrogen).

With N equal 14, and O equal 16, express the formula for the compound.

11. Give an analysis of the action of nitric acid upon a solution of a ferrous salt ($FeSO_4$).

12. (a) In the electrolysis of potassium sulphate, what gases are evolved at the poles and in what proportion by volume? Explain the alkalinity at the cathode and acidity at the anode.

(b) When copper sulphate solution is electrolyzed between copper poles, what happens? What practical use is made of this action?

13. (a) What is the difference between steel, wrought iron, and cast iron?

(b) Describe briefly the Bessemer process.

14. (a) What are the usual impurities of river and spring water?

(b) How may pure water be prepared?

(c) When is water said to be *hard,* and to what is the *hardness* generally due?

(d) How may the hardness be removed?

(e) Why is an intermittent filter preferable to a continuous filter for the purification of water on a large scale?

15. (a) When ordinary dilute nitric acid acts on copper, the reduction product of nitric acid formed is NO (nitric oxide). With this special information and a general knowledge of the action, figure out the equation for the reaction.

(b) When concentrated sulphuric acid acts on zinc, hydrogen sulphide is obtained as the reduction product of sulphuric acid. Figure out the equation for the reaction.

16. Give directions for separating the two metals in each of the following:

(a) Solution containing copper sulphate and zinc sulphate;

(b) Silver nitrate and lead nitrate;
(c) Aluminium chloride and calcium chloride.

Specimen Examination in Civics (1-2 unit)

1. What powers are conferred on Congress by the Constitution of the United States?
2. What are the duties of the attorney general of Texas?
3. Describe in outline the government of a Texas county.

Specimen Examination in English (3 units)

The entire paper will be graded on spelling, punctuation, and the structure of sentences and paragraphs.

I.

1. Tell, in a page or more, of the part played by Roderick Dhu in *The Lady of the Lake.*
2. In a paragraph of half a page or less, describe the hall of Rotherwood.
3. What is your estimate of the character of Lord Clive? (Two good paragraphs.)
4. Give some account of De Quincey's early experiences in London.

II.

"I pray you, *tarry;* pause a *day* or *two*
Before you hazard; *for,* in *choosing* wrong,
I lose your company; therefore forbear *awhile.*
There's *something* tells *me,* but it is *not* love,
I would not lose you; and you know *yourself*
Hate counsels not in such a quality."

1. Parse the italicised words in this passage.
2. Analyze the first sentence, and parse the dependent clauses in the second sentence.

3. (a) Account for the punctuation of the second sentence. (b) Give and illustrate with sentences of your own the rules for the use of the colon.

4. What is meant by emphasis in a sentence, and what are the means of securing it?

5. Define *canto, climax, blank verse, euphony, iamb, idiom, simile, exposition, paragraph.*

Specimen Examination in French (2 units)

I. GRAMMAR

1. Give the plural of the following nouns: *bras, neveu, fils, roi, bateau, genou, œil, voix, amiral, travail, lieu, nez.*

2. Discuss the partitive and inclusive senses of the noun, giving examples.

3. Give the feminine singular and masculine plural of the following adjectives: *royal, plein, aisé, facile, bas, cruel, jaloux, vif, fier, vieux, fou, doux, frais, blanc, public.*

4. Compare the following adjectives and adverbs: *bon, peu, petit, bien, mal, aimable.*

5. Give the disjunctive forms of the personal pronouns and mention three ways in which they are used. Illustrate.

6. Discuss the interrogative pronouns, giving examples to illustrate your statements.

7. Give all forms of the following verbs in the present and preterit indicative: *frapper, jouir, perdre, placer.*

8. Give in full the future indicative and perfect subjunctive of *se rendre,* and the pluperfect indicative passive of *battre.*

9. Conjugate in the present indicative: *vouloir, pouvoir, savoir, aller.*

10. Give the principal parts of the following verbs: *venir,*

craindre, conduire, naître, partir, ouvrir, mourir, vivre, suivre, fuir.

II. ENGLISH INTO FRENCH

1. I have found this in the garden, and I will give it to you. 2. My brother will be neither in Paris nor in London; he is now in Italy. 3. Did the baker sell you this bread? 4. He did not sell it to us; he gave it to us. 5. If you have money, give me some for these poor children. 6. If their father had money enough, he would buy new coats for them. 7. The people of this village are building a new church; they will finish it next month. 8. Her uncle lost much money yesterday; he is no longer rich. 9. This house has twenty-six rooms; it is the largest house in town. 10. If the boy had forgotten his lesson, would he have been punished? 11. Let us not take a walk; it is already two o'clock, and your friend will soon be here. 12. The poor woman must work in order that she may have bread for her children. 13. Here is the letter which we received this morning. 14. What is that? It is the picture of which I spoke to you yesterday morning. 15. Why have you seated yourselves about the fire? It is warm enough near the window.

III. FRENCH INTO ENGLISH

A.

Eh bien, mon père, répondit le gendre, si vous le voulez absolument, il faudra donc vous contenter. Mais je ne veux pas vous cacher que cela me fera beaucoup de peine, et que je n'en ai guère plus d'envie que de me noyer. On sait qui on perd et on ne sait pas qui l'on trouve. J'avais une brave femme, une belle femme, douce, courageuse, bonne à ses père et mère, bonne à son mari, bonne à ses enfants,

bonne au travail, aux champs comme à la maison, adroite à l'ouvrage, bonne à tout enfin; et quand vous me l'avez donnée, quand je l'ai prise, nous n'avions pas mis dans nos conditions que je viendrais à l'oublier si j'avais le malheur de la perdre.

Ce que tu dis là est d'un bon cœur, Germain, reprit le père Maurice; je sais que tu as aimé ma fille, que tu l'as rendue heureuse, et que si tu avais pu contenter la mort en passant à sa place, Catherine serait en vie à l'heure qu'il est, et toi dans le cimetière. Elle méritait bien d'être aimée de toi à ce point-là, et si tu ne t'en consoles pas, nous ne nous en consolons pas non plus. Mais je ne te parle pas de l'oublier. Le bon Dieu a voulu qu'elle nous quittât, et nous ne passons pas un jour sans lui faire savoir par nos prières, nos pensées, nos paroles et nos actions, que nous respectons son souvenir et que nous sommes fâchés de son départ. Mais si elle pouvait te parler de l'autre monde et te donner à connaître sa volonté, elle te commanderait de chercher une mère pour ses petits orphelins. Il s'agit donc de recontrer une femme qui soit digne de la remplacer. Ce ne sera pas bien aisé; mais ce n'est pas impossible; et quand nous te l'aurons trouvée, tu l'aimeras comme tu aimas ma fille, parce que tu es un honnête homme, et que tu lui sauras gré de nous rendre service et d'aimer tes enfants.

C'est bien, père Maurice, dit Germain, je ferai votre volonté comme je l'ai toujours faite.

B.

Sans doute; il te regardait vendre tes bêtes et il trouvait que tu t'y prenais bien, que tu étais un garçon de bonne mine, que tu paraissais actif et entendu; et quand je lui eus did tout ce que tu es et comme tu te conduis bien

avec nous, depuis huit ans que nous vivons et travaillons ensemble, sans avoir jamais eu un mot de chagrin ou de colère, il s'est mis dans la tête de te faire épouser sa fille; ce qui me convient aussi, je te le confesse, d'après le bonne renommée qu'elle a, d'après l'honnêteté de sa famille et les bonnes affaires où je sais qu'ils sont.

Je vois, père Maurice, que vous tenez un peu aux bonnes affaires.

Sans doute, j'y tiens. Est-ce que tu n'y tiens pas aussi?

J'y tiens si vous voulez, pour vous faire plaisir; mais vous savez que, pour ma part, je ne m'embarrasse jamais de ce qui me revient ou de ce qui ne me revient pas dans nos profits. Je ne m'entends pas à faire des partages, et ma tête n'est pas bonne pour ces choses-là. Je connais la terre, je connais les bœufs, les chevaux, les attelages, les semences, la battaison, les fourrages. Pour les moutons, la vigne, le jardinage, les menus profits et la culture fine, vous savez que ça regarde votre fils et que je ne m'en mêle pas beaucoup. Quant à l'argent, ma mémoire est courte, et j'aimerais mieux tout céder que de disputer sur le tien et le mien. Je craindrais de me tromper et de réclamer ce qui ne m'est pas dû, et si les affaires n'étaient pas simples et claires, je ne m'y retrouverais jamais.

C'est tant pis, mon fils, et voilà pourquoi j'aimerais que tu eusses une femme de tête pour me remplacer quand je n'y serai plus. Tu n'as jamais voulu voir clair dans nos comptes, et ça pourrait t'amener du désagrément avec mon fils, quand vous ne m'aurez plus pour vous mettre d'accord et vous dire ce qui vous revient à chacun.

Specimen Examination in German (2 units)

1. Define the strong declension of nouns.

2. Decline the German of: *the high tree, this old church, that little child, red wine, black ink, new dress, a young boy, a strange lady, a beautiful valley.*

3. Inflect in the present indicative the German of *hide, blow, read, carry, load, push, may, must, act, talk, reckon, row.*

4. Give the imperative of *haben, sein, werden, bringen, lesen.*

5. Inflect in the imperfect subjunctive the German of *force, become, wash, grow, do, die, stand, spring, swing, shoot, advise, suffer.*

6. Give a synopsis of *sein, anfangen, gehen.*

7. Compare the following adjectives: *gern, edel, hoch, gut, viel, alt, fromm, streng.*

8. Translate into German: 1. Please take a seat. That chair is not comfortable; take this one. 2. What picture are you talking about? 3. Good morning, sir. Do you wish something in the way of books? 4. Yes, if you have something right good. 5. Do you wish something light, some novel, for example? 6. Father, have you any money with you? The teacher says that I shall soon need some more new books. 7. Yes, I want you to learn German thoroughly. Are you through with the grammar already? 8. May I ask what time it is? Perhaps I ought to be going home. 9. Oh, it can not be so very late, if it is pretty dark outside. 10. The clock is on the point of striking twelve; I would not have thought that it was so late. 11. They say it is dangerous in the night; they claim to have seen footpads there. 12. We were to prepare the first half of the forty-second lesson.

9. Translation of a passage of simple German prose at sight (see texts given in Course A of the current *Catalogue*).

Specimen Examination in Greek (2 units)

[Translate into simple, idiomatic English.]

1. Translate Xen. *Anab.*, I, 9, sections 11-12, inclusive.

2. Decline all pronouns and give the principal parts of all verbs in section 11.

3. Translate Xen. *Anab.*, III, 4, sections 38-40, inclusive.

4. Give the principal parts of the first verb in section 39, and a synopsis of the future and first aorist systems.

5. Explain the syntax of conditions referring to future time, with examples in Greek.

6. Translate (at sight) Xen. *Hellen.*, II, 3, sections 11-12.

7. Translate into Greek: (a) In the night the Greeks made a great deal of noise, so that the enemy, when they heard it, were frightened and fled. (b) Tissaphernes said that he had already asked the king to permit him to do that. "But," said the king, "I wish to know why you joined the expedition against me." (c) And this man said that Ariaeus bade them send a guard to the bridge, in order that Tissaphernes might not destroy it during the night.

Specimen Examination in History (any 2 units)

[The examiner will lay special stress on accuracy and on clearness and completeness of exposition.]

A. Ancient History (1 unit)

1. (a) Write a brief account of the commercial and colonial activities of the Phoenicians, and show carefully their importance in the history of world civilization.

(b) Write a brief summary of Persian history to the death of Cambyses.

2. (a) Name, and state the purpose of, each of the principal reforms of Solon.

(b) Write a summary of the history of Greece under Macedonian and Roman rule.

3. (a) State the causes of each of the Punic wars.

(b) Write a brief sketch (not more than 100 words) of two of the following statesmen: (1) Tiberius Gracchus, (2) Marius, (3) Julius Caesar, (4) Pompey the Great, (5) Augustus.

(c) Mention three of the chief causes of the decline of the Roman Empire.

B. Mediaeval and Modern History (1 unit)

1. (a) Describe the conditions in Europe which led to the development of feudalism.

(b) Describe the usual disposition of his estate by a great lord.

(c) State the principal causes for the decline of feudalism in the later Middle Ages.

2. Describe the reforms of Pope Gregory VII (Hildebrand), and explain why the emperors opposed them.

3. Write a summary of the history of France under Richelieu and Louis XIII.

4. (a) Describe briefly the conditions in France which caused the Revolution.

(b) Describe the Revolution of 1848 in France.

C. History of England (1 unit)

1. Who formed the original stock of the English people? and under what circumstances did they enter England?

2. Give an account of the struggle between Henry II and Archbishop Thomas, bringing out clearly the essential questions involved.

3. Explain the differences between king and parliament which led to the Civil War.

4. What were the provisions of the reform bill of 1832, and how was its passage brought about?

5. Draw a map of England after the peace of Wedmore or Chippenham.

D. American History (1 unit)

1. Explain how the discovery of America was brought about. What were the ideas of the early explorers concerning its geography, and how were they corrected?

2. Give a sketch of the experiences of the Virginia colony up to 1624.

3. What was the first constitution of the United States called? Describe the organization of the government it set up.

4. Give a description of the geographical plan of attack and defense in the Civil War, and explain how the defense was gradually broken down.

5. Draw a map showing the territorial growth of the United States, with explanatory marks or notes.

Specimen Examination in Latin (3 units)

I. Translate Caesar's *Gallic War,* Book II, Chap. V: *cohortatus.....oratione.....se convenire principumque.... obsides.... Quae .... ab his....re publicae....intersit, manus....multitudine....configendum sit.*

II. Construe italicised words: if substantive, give declension, gender, case, and the reason therefor; if verb, give mood and why.

III. 1. Translate Cicero's *Man. Law,* Sect. 49: *Quare .... sit neglegi .... possit, sit administrandum, ... ei ....possitis, ...sit....scientia, ...ab his .... oblatum .... conservandum .... conferatis?*

2. Construe the italicised words.

3. Compare all adjectives in the passage.

4. Give the principal parts of all verbs in the passage.

IV. 1. Translate Virgil's *Aeneid,* Bk. I, 124-132.

2. Scan the first three lines of the passage.

V. Translate into Latin:

1. Now that the war is over (*conficio*) let every man return (*redeo*) to his home.

2. If he should do that; if he were doing that; if he had done that.

3. He ought to write a letter. [Express in three ways.]

4. Put into passive voice:

(a) ei librum dedi.

(b) eum consulem faciunt.

(c) Caesar invidebat Ciceroni.

5. Express the following sentences after *dixit:*

(a) si pugnat, vincit—vincitur.

(b) si pugnat, vincat—vincatur.

(c) si pugnaret, vinceret—vinceretur.

(d) si pugnavisset, victus esset.

Specimen Examination in Mathematics (3 units)

Algebra (1½ units)*

1. Factor as far as you can,

(a) $x^2-4ax+4a^2-b^2+2by-y^2$

(b) a^3+b^3+a+b

2. Solve $\frac{2x-5}{5}+\frac{x-3}{2x-15}=\frac{4x-3}{10}-\frac{11}{10}$

3. When are two algebraic expressions identical?

(a) Show that $\sqrt{a}+\sqrt{b}$ is not identically equal to $\sqrt{a+b}$

(b) Show that $\frac{a}{b}+\frac{c}{d}$ is not identically equal to $\frac{a+c}{b+d}$

4. Show that $(x + a) = b$ and $(x + a)^2 = b^2$ are not equivalent.

5. Write down a quadratic whose roots are *a* and *b*. What is the sum and what is the product of the roots of $ax^2+bx+c=0$? Solve this equation.

Geometry (1½ units)*

1. Show that in a right triangle one of whose angles is 30°, the side opposite this angle is half the hypothenuse.

2. Show how to divide a given line into three equal parts.

3. Define locus, and prove that the locus of the vertex of an angle which moves so that its arms pass through two fixed points is two equal circular arcs passing through these points.

4. Prove that the bisector of an angle of a triangle divides the opposite side into two parts proportional to the including sides.

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*Prescribed.

*Solid Geometry** ($\frac{1}{2}$ unit)*

1. Lines perpendicular to the same plane are parallel to each other.

2. Show how to pass a plane through a given point in such a manner that it will not meet either of a pair of non-intersecting, non-parallel lines.

3. Prove that there cannot be more than five regular polyhedra.

4. Show that the volume of a triangular pyramid is one-third of the base multiplied by the altitude.

5. What is meant by a pair of polar spherical triangles? State two theorems relating to a pair of polar triangles.

6. Show that the area of a sphere is $4\pi A^2$.

*Trigonometry** ($\frac{1}{2}$ unit)*

1. Using geometrical figures, establish the formulas for the sine and cosine of (x+y) and (x—y).

2. Prove that $\tan \frac{1}{2} A = \sqrt{\frac{1-\cos A}{1+\cos A}}$

3. Calculate, not using the tables, sine, cosine, and tangent of 11° 15′.

4. In a triangle show that $\frac{a+b}{a-b} = \frac{\tan \frac{1}{2}(A+B)}{\tan \frac{1}{2}(A-B)}$. Of what use is this formula?

5. Given a=41.4, b=52.8, A=40° 19′, calculate, using the tables, B, C, c.

6. Given a=21.2, b=3.9, c=14.2, calculate A, B, C.

7. In a naval battle it is very desirable to find the distance between two ships. Show that measurements could be made on one man-of-war from which the distance to an enemy's vessel could be determined.

**Elective.

Specimen Examination in Physics (1 unit)

1. Define speed, velocity, acceleration, momentum.

2. A boat is rowed with a velocity of 4 miles per hour straight across a river which flows at a rate of 3 miles per hour. Find the actual velocity of the boat.

3. (a) Explain the action of a siphon. (b) Explain Boyle's Law.

4. State Archimedes's Principle, and explain its application in finding the specific gravity of a solid.

5. Find the specific heat of a substance 100 grams of which at 90°, when immersed in 250 grams of water at 12°, gave a resulting temperature of 18°.

6. Show that in an organ pipe, closed at the top, the wave length of the fundamental note is four times the length of the pipe.

7. Explain the action of a Leyden Jar or other form of condenser.

8. Explain the action of an induction coil.

9. Prove that in reflection by a plane mirror the image is as far behind the mirror as the object is in front of it.

10. Explain the formation of real and virtual images by a convex lens.

Specimen Examination in Physiography (½ unit)

Physical Geography

1. Explain, somewhat in detail, the change of seasons. Illustrate your answer with a diagram.

2. What are isothermal lines? Sketch a map and show upon it four such lines.

3. What is the meaning of "high" and "low" upon a weather map?

4. Where does the heaviest rainfall occur? What is a "cold wave"?

5. In what direction do the trade winds blow over the South Atlantic? Why do they take that course? Explain.

6. What is a delta shore line and how is it formed?

7. In what direction does a cyclone rotate in the northern hemisphere? Explain.

8. What are revived rivers? Engrafted rivers?

9. How may the course of an ocean current be determined?

10. What is a dissected plateau? A peneplain?

Geography of Texas

1. Classify the relief of the State.

2. Where are iron ores found? Name the kinds.

3. What part of the State has the greatest rainfall?

4. Compare the vegetation of East Texas with that of the Panhandle.

5. Where does lignite occur? Coal? Petroleum? Asphalt? Granite?

Specimen Examination in Physiology (½ unit)

1. (a) What substances are poured out upon the skin that necessitate bathing? (b) Describe in full the organs that produce them. (c) Why should soap be used?

2. (a) What is a neuron or axis cylinder, a nerve-fibre, a nerve, a nerve-center? (b) What is the primary function of a nervous system? (c) What is the relative position of the white and gray substance of the spinal cord? (d) Of what does the white substance consist? The gray? (e) What are the functions of the spinal cord?

3. (a) Describe the different corpuscles in the blood, and give the function of the red corpuscles. (b) Explain the course the blood takes in going from the left auricle back to the same place.

4. Mention where, and explain how and in what form, oxygen enters and leaves (a) arterial blood, (b) venous blood.

5. (a) What tissue of the human body consumes the largest amount of oxygen? Give the evidence upon which your statement is based. (b) How is the heat of the body produced and the normal temperature maintained?

6. Name the glands that secrete substances concerned in digestion, and give the names of the ferment or ferments of each secretion.

7. (a) Name the four most important gaseous constituents of the earth's atmosphere. (b) Give the cycle and functions of each of the mentioned constituents.

8. Name in the order of amount consumed (a) of oxygen, (b) of air vitiated by the following when used in equal weights as fuel: coal, dry-wood, coke, paraffin; and the following substances when used in quantity sufficient to produce an equal amount of light: incandescent electric light, gas, paraffin oil, sperm candles, tallow candles.

9. (a) What impurities may rain water contain? Why is it so valuable for domestic purposes? What is the great objection to the use of it? (b) What methods may be used in the household for the purification of water? (c) What is necessary that every house filter may be safe for use?

10. (I) Explain the "Germ Theory of Disease." Give Koch's Dicta. (II) Define (a) bacteria; (b) saprophytes; (c) parasites; (d) pathogenic micro-organisms.

11. State the cause of the following diseases, and the precautions necessary to be taken to limit their spread: (a) consumption; (b) smallpox; (c) typhoid fever (enteric fever); diphtheria; (e) Asiatic cholera; (f) bubonic plague.

12. (a) What is the exact meaning of the terms: antiseptic, disinfectants, deodorants? (b) What is the essential difference between a disinfectant and a deodorant? (c)

How should the bodies of those dead of infectious diseases be cared for?

Specimen Examination in Spanish (2 units)

I. Verbs

1. Give a synopsis of the first and third person singular and first person plural of the following verbs: *querer, conducir, poder, regir, traer, saber, ir, ser, convertir, avergonzarse.*

2. Give a synopsis in the second person singular and plural of: *atribuir, oler, tener, andar, decir, dar.*

3. Give a synopsis in the third person plural of: *oír, poner, hacer, salir, venir, valer, caer, seguir, estar, reñir, reirse, argüir.*

4. Give a synopsis in the third person singular, compound tenses, of the verb *abrir.*

5. Write out in full, affirmatively and negatively, the imperative of: *dormir, venir, ir, avergonzarse, elegir.*

6. Write out in full the preterite of *jugar, sentir, tropezar, lucir, leer, trocar, pagar.*

7. Give the gerund and past participle of all the verbs in questions 1 and 2.

II.

1. Give the pronouns which are the direct objects of a verb. Give the pronouns which are the direct objects of a preposition.

2. Translate into Spanish: (a) I call you, and they are calling me. (b) This pen is broken. I cannot write with it. (c) Have you written it (the letter)? Yes, and I have given it to him. (d) Give it to me. No, I do not wish to give it to you. (e) Here is my novel *(novela).* To-day I have added two chapters *(capítulos)* to it. (f)

I shall not ask him for it. (g) We like to study. (h) I do not believe it. I do not believe in it.

3. From the above sentences, state the rule for the position of object pronouns in Spanish.

4. Give clearly four rules for the subjunctive in Spanish. Give an illustration under each rule.

5. Translate the following sentences, with care as to the expression of the passive: (1) Books sold here. (2) It is said that John is sick. (3) Spanish is spoken in this school. (4) Is one able to enter? Can we enter?

6. How is the passive very frequently expressed in Spanish?

III. Sentences for Translation into Spanish

1. How long have you been waiting for me? I came at half past three, and now it is a quarter to five. I have been waiting for you an hour and a quarter.

2. Is it cold to-day? Yes, it is colder than you think. I am trembling with cold. I am cold. Yes, because the room is so cold.

3. Bring me a cup of coffee, please. Do you wish it with milk? Yes, and do me the favor to bring a plate with bread and butter. My sister wishes a glass of milk or a cup of chocolate. We are both tired and are hungry. We have been working all the afternoon.

4. Have you John's hat? No, but Henry has it. Mine is here, and, if he wants it, I will lend it to him. No, yours is new. Louis's is old. John can take Louis's.

5. Have you looked for Mary? No, where is she? I believe she is at Laura's house, but I am not sure. I hope that she may come home soon. Papa wishes us to go out with him this afternoon.

6. If we had paper, we could write the Spanish exercises

for to-morrow. If I had paper, I should give it to you. Many thanks.

IV. Spanish into English

Fiel á los hábitos contraídos en el extranjero, Servando, lejos de mezclarse en lo conversación general que sostenían los demás pasajeros, se recostó sobre el codo, y se puso á mirar hacia el mar.

Esta tiesura é incomunicación, que nace generalmente en los ingleses de su cortedad de genio y de los hábitos de su país son en ellos cosas naturales, y no ofended. Mas aquellos que en nuestro país imitan esto, sin que á ello les autorice la costumbre, ni los disculpe la cortedad de genio, se hacen insufribles, porque demuestran desdén. Ahora bien, de todos los insultos, ninguno hiere cual el desdén; pues que los demás insultos recaen sobre algo, y nacen de una causa: pero el desdén germina y se eleva sin que se siembre, como la mala yerba.

Servando miraba la hermosa vista que á sus ojos se ofrecía, por no mirar á otra parte, y no porque le llamase la atención. Hay seres que, á no moverlos una pasión, nada miran con interés ni detenimiento, á no ser su espejo cuando están ellos delante. Son los tales instrumentos sin melodías, en los que no vibra sino una sola cuerda. No obstante, la vista era magnífica y grandiosa, como todas las que ostenta en su composición el mar, que es la vista más admirable y conmovedora después de la del cielo. Aquel día uno y otro rivalizaban en esplendores; la atmósfera que entre ambos se movía suavemente, brillaba como un flúido de cristal.

Veíase en lontananza á Rota, rústica jardinera, que con las manos llenas de frutas y de legumbres, es la primera en dar la bienvenida á los barcos, que cansados y exhaustos de la travesia del líquido desierto, llegan á los puertos re-

cogiendo sus alas, como los pájaros á sus nidos. Mientras más avanzaba el falucho hendiendo las aguas, que en aquel día, más saladas que amargas, levantaban suaves murmullos y melodiosos gorjeos á su paso, más se iba destacando la imponente mole abandonada del castillo de Santa Catalina, detrás del cual se iba retirando modestamente Rota, cual si se volviese á sus huertas, á sus viñas y á sus melonares. El fuerte coloso se alza aún, haciendo frente al embate de las olas, aunque sin su vida de fuego y su corazón de bronce; como un valiente y fuerte centinela que, aún desarmado y herido, no abandona el puesto. Entró el lijero surcador de la bahía en el Guadalete, á cuya orilla izquierda se tiende y estira el Puerto de Santa María. Lo primero que á la vista se presenta, son sus magníficas bodegas, que surten á Europa de su mejor vino; y algo retirado de la orilla, ese circo magno, esa plaza de toros, teatro de la extraña y bárbara diversión, por desgracia anexa al nombre español. Añeja diversión, que el tiempo poderoso no embota, que la civilización no modifica siquiera; en la que solo es necia y toscamente grande el hombre que por lucro expone su vida, é impiadosa é inhumanamente pequeños los que, sin riesgo y seguros, le aplauden y le animan, sin poder socorrerle si sucumbe. Esto hace que tan repulsante regocijo no halle más disculpa ante el juicio de la razón, ni ante el sentido del carazón, sino la embriaguez que produce, trastornando al hombre que ambas cosas posee, entendimiento y corazón; como lo hace la embriaguez del vino. Quítese, pues, la causa para evitar el efecto. Y así probará al mundo la España moderna que no cifra todo su pensamiento *civilizador* en suprimir los monjes y dejar arruinar los conventos.

Specimen Examination in Zoology (1 unit)

1. Compare Amoeba and Paramecium with respect to structure and activities.

2. Describe the anatomy of the fresh-water Hydra.

3. Give an account of the habits of the earthworm, and state which of its activities make it a valuable aid to agriculture.

4. Define the following terms: (a) protoplasm, (b) nucleus, (c) flagellum, (d) ovary, (e) clitellum.

5. State the distinguishing characteristics of the class Insecta.

6. Name and characterize the principal orders of Insects.

7. Give an account of communal life among the ants, bees, and wasps.

8. Name and describe the mode of life of three parasitic animals.

9. State the chief points of difference in structure between a fish and a frog.

10. Give a general classification of the animal kingdom, beginning with the simplest group.

B. AFFILIATED SCHOOLS

REGULATIONS GOVERNING AFFILIATION

The Regents and the Faculty desire to bring the University into such close relationship with the high schools of the State that students may be able to pass from the latter to the former without perceptible break in the course of study. The privilege of affiliation, by which graduates of the high schools can enter the University without examination, is, therefore, offered on the following conditions:

1. When the authorities of any school desire affiliation with the University, they shall make formal application to the Visitor of Schools. Memoranda blanks will be furnished to the Superintendent or the Principal of the school seeking affiliation. Upon these blanks may be indicated the courses of study in the different branches, the number of teachers and their qualifications, and such information in regard to the apparatus, appliances, etc., as may serve to give a fair idea of the general efficiency of the school.

2. If this information be satisfactory, the authorities of the school may be asked to submit specimen examination papers prepared by students pursuing the high-school subjects in which affiliation may be desired.

3. No school will be affiliated before the Visitor of Schools, or some person designated by him, shall have visited it, and shall have rendered a report concerning its equipment and work.

4. If the Faculty shall be satisfied that the school should be affiliated, the authorities will be duly notified, and the name of the school will be entered, under the proper group, on the list of affiliated schools. The list will be published in the Catalogue of the University.

5. To be affiliated at all, a school must prepare its graduates for the Freshman Class in English, History, and Mathematics. Complete affiliation includes enough other units to admit graduates to the Freshman Class without conditions. To be admitted without conditions, fourteen units must be presented.

6. Affiliation may be secured in the following subjects with their respective credits:—

Prescribed:

(1) English, 3 units.
(2) History, 2 units, chosen from the following:
Ancient, 1.
Mediaeval and Modern, 1.
English, 1.
American, $\frac{1}{2}$ or 1.
(3) Algebra, $1\frac{1}{2}$ units.
(4) Geometry, $1\frac{1}{2}$ units.

Elective:

English:

(1) English, 1 unit.

Civics and History:

(2) Civics, $\frac{1}{2}$ unit.
(3) History, $\frac{1}{2}$, 1, $1\frac{1}{2}$, or 2 units (see list above).

Languages:

(4) Latin, 3 or 4 units.
(5) Greek, 2 or 3 units.
(6) German, 2 or 3 units.
(7) French, 2 or 3 units.
(8) Spanish, 2 or 3 units.

Sciences and Mathematics:

(9) Physics, 1 or 2 units.
(10) Chemistry, 1 or 2 units.
(11) Botany, 1 or 2 units.
(12) Zoology, 1 unit.
(13) Physiography, ½ unit.
(14) Physiology, ½ unit.
(15) Solid Geometry, ½ unit.
(16) Trigonometry, ½ unit.
(17) Manual Training, 1 or 2 units.

CHANGES IN REQUIREMENTS FOR 1909 AND THEREAFTER

1. For the sessions of 1909-1910 and 1910-1911, applicants will be required to present all of the 14 units required for admission to the University, except 2 units upon which they may be conditioned.

2. For the session of 1911-1912, applicants will be required to present all of the 14 units. For detailed statement of prescribed and elective units, see page 30 of the University Catalogue.

3. Applicants for admission to the University who are graduates of affiliated schools, will be credited with the subjects in which the schools are affiliated and which have been completed, and will be required to pass examinations in such subjects, if any, as may be required to make 12 units in 1909 and 1910, and 14 units in 1911.

GROUPS OF AFFILIATED SCHOOLS

Affiliated schools shall be divided into three groups:

1. The First Group shall include schools affiliated in at least 14 units.

2. The Second Group shall include schools affiliated in at least 11 units. Graduates from schools of this group must present 11 units or lose the advantage of affiliation.

3. The Third Group shall include schools affiliated in at least 8 units.

. 4. The affiliation of each school admitted into the Third Group may continue for a period of three years, and, if at the expiration of that time it has not secured sufficient additional units to raise it to the Second Group, it may continue in the Third Group by passing through the steps required for original affiliation.

LIST OF AFFILIATED SCHOOLS

B.....Botany.
C.....Chemistry.
Civ.....Civics.
E.....English.
F.....French.
G.....German.
Gr.....Greek.
H.....History.
L.....Latin.
M.....Mathematics.
M. T.....Manual Training.
P.....Physics.
P. and H.....Physiology and Hygiene.
Ph.....Physiography.
S.....Spanish.
S. G.....Solid Geometry.
T.....Trigonometry.
Z.....Zoology.

(Abbreviations represent the minimum numbers of units allowed in the several subjects, *e. g.*, E. = English, 3 units; figures, in parentheses, follow abbreviations when schools have more than the minimum number of units in any subject, *e. g.*, H. (3) = History, 3 units.)

GROUP I.

(Schools in this group have at least fourteen units of credit.)

Name. Extent of Affiliation.

Academy of Our Lady of the Lake, San Antonio.....
.....E., H. (2½), M., G. (3), P., Ph., P. and H., Civ.
Superintendent, Fr. H. J. Constantineau, O. M. I.

Alexander Collegiate Institute, Jacksonville....E., H., M., L. (4), G.
Principal, W. K. Strother, M. A.

Alice High School, Alice.....E., H. (2½), M., L., S., Civ.
Superintendent, H. N. Stamper; Principal, J. E. Evans.

Allen Academy, Bryan.....E., H., M., L., G., S. G., T.
Principals, J. H. Allen, R. O. Allen, H. W. South.

Austin High School, Austin.....E., H. (2½), M., L.,
.....G. (3), S. (3), B., P., C., Z., Civ., M. T. (2), S. G., T.
Superintendent, Arthur N. McCallum, B. A.; Principal,
J. E. Pearce, M. A.

Austin Male Academy, Austin.....
.....E., H. (4), M., L., G. (3), S. (3), S. G., T.
Principal, J. Stanley Ford, B. A., M. A.

Name. Extent of Affiliation.

Ball High School, Galveston.....
E., H. (3), M., L., Gr. (3), F. (3), G. (3), S. (3), C., P., Ph., T.
Superintendent, John W. Hopkins, M. A.; Principal,
W. A. James, B. A., M. A.

Beaumont High School, Beaumont.....
E., H., M., L. (4), G. (3), F. (3), S. (3), C., P., B., S. G., Civ.
Superintendent, H. F. Triplett, B. S., M. S.; Principal,
J. G. Fuqua, B. A.

Belton High School, Belton.....
.....E., H. (2½), M., L., S. (3), P., B., Ph., Civ., M. T., S. G.
Superintendent, James B. Hubbard; Principal,
W. H. Hamilton, B. A.

Blinn Memorial College, Brenham.....
.....E., H. (2½), M., G. (3), C., P., Ph., P. and H., Civ.
President, John Pluenneke, B. S., D. D.

Bonham High School, Bonham.....E., H., M., L., G., B., P., C., Ph.
Superintendent, I. W. Evans; Principal, R. C. Campbell, B. S.

Bowie High School, Bowie.....
.....E., H. (2½), M., L. (4), P., P. and H., S. G., T.
Superintendent, G. L. Marshall, B. A.; Principal, H. T. Matthews.

Brenham High School, Brenham..E., H. (3), M., L., G., P., S. G., T.
Superintendent, Peyton Irving, Jr., B. A.; Principal,
H. E. Breneke, B. A.

Caldwell High School, Caldwell.....E., H., M., L., G., T., Civ.
Superintendent, J. W. Smith; Principal, Miss L. H. Smith.

Calvert High School, Calvert.....E., H. (3), M., L., C., S. G., T.
Superintendent, W. A. Lake, B. A.; Principal,
Miss Glennie Wilson, B. Lit.

Cameron High School, Cameron.....
.....E., H. (2½), M., L., G., C., P., Ph., P. and H., Civ., S. G.
Superintendent, J. E. Watts, B. A.; Principal,
Charles E. Oates, B. A.

Cleburne High School, Cleburne.....
.....E., H. (4), M., L., P., B., Ph., P. and H., S. G., T.
Superintendent, R. G. Hall, B. A.; Principal,
Emmett Brown, B. A.

Coronal Institute, San Marcos.....E., H., M., L., S., G., C.
President, Rev. Sterling Fisher.

Name. Extent of Affiliation.

Corpus Christi High School, Corpus Christi.....
.....E., H., M., S. (3), P., C., Civ., S. G., T.
Superintendent, C. W. Crossley; Principal, M. Menger.

Corsicana High School, Corsicana.....
...E., H. (3), M., L. (4), G. (3), F., C., P., T., Ph., Civ., S. G.
Superintendent, J. E. Blair, B. A.; Principal,
S. W. Alexander, B. A.

Dallas High School, Dallas.....
...E., H. (2½), M., L., G., C., P., P. and H., S. G., M. T. (2), T.
Superintendent, Arthur Lefevre, C. E.; Principal,
Joseph Morgan, B. A.

Denison High School, Denison.....E., H., M., L., G., C., P., B., T.
Superintendent, F. B. Hughes, B. S.; Principal,
O. A. Maxwell, B. S.

Denton High School, Denton.....
.....E., H., M., L., C., P., Ph., P. and H., Civ., T.
Superintendent, J. S. Carlisle.

El Paso High School, El Paso.....
.....E., H. (3), M., L., S., C., P., Ph., P. and H.
Superintendent, F. M. Martin, B. A.; Principal,
Norman R. Crozier, B. A.

Ennis High School, Ennis.....E., H. (2½), M., L., G., C., Civ., S. G.
Superintendent S. A. Myatt, M. A.; Principal,
W. E. Bradshaw, B. A.

Fort Worth High School, Fort Worth.....
.....E., H. (2½), M., L., G., S., C., Civ., M. T., T., S. G.
Superintendent, J. W. Cantwell, B. A.; Principal,
R. L. Paschal, B. A.

Gainesville High School, Gainesville.....E., H., M., L., G., S., C., P.
Superintendent E. F. Comegys, M. A.; Principal,
J. P. Glasgow, M. A.

Grayson College, Whitewright.....E., H., M., L. (4), S. G., T.
President, H. S. Parsons.

Greenville High School, Greenville.....
.....E., H. (2½), M., L., P., C., P. and H., Civ.
Superintendent, L. C. Gee, M. A.; Principal, H. O. McCain, B. S.

Name. Extent of Affiliation.

Hico High School, Hico.....E., H. (3), M., L., C., P., Civ.
Superintendent, W. E. Edelen, M. A.; Principal, J. B. Ford, B. A.

Hillsboro High School, Hillsboro.....E., H., M., L., G., P., Ph., Civ.
Superintendent, J. D. Brooks, B. A.; Principal,
R. W. Rogers, B. S.

Houston Heights High School, Houston..E., H. (2½), M., L., G., Civ.
Superintendent, A. H. Russell; Principal, L. W. Greathouse, B. S.

Houston High School, Houston.....E., H. (2½),
...M., L., G. (3), S. (3), B., C., P., M. T., S. G., Civ., P. and H.
Superintendent, P. W. Horn, M. A.; Principal, W. C. Smiley, B. A.

John C. French High School, Cuero.....
.....E., H. (2½), M., L., G., S. G., M. T., T., Civ.
Superintendent, W. S. Fleming, B. A.

Lockhart High School, Lockhart.....E., H. (2½), M., L., P., C., Civ.
Superintendent, James F. Johnson, B. S.; Principal,
Joseph Hatchitt.

Mansfield Academy, Mansfield.....E., H., M., G. (3), S. G., T., P., C.
Superintendent, J. Henry Phillips.

Marlin High School, Marlin..E., H. (3), M., L., P., Ph., M. T., S. G.
Superintendent, W. F. Doughty, B. A.; Principal,
B. F. Sisk, M. A.

Marshall High School, Marshall.....
.....E., H. (2½), M., L., C., P., S. G., P. and H., Civ.
Superintendent, W. H. Attebery, B. A.; Principal,
R. A. Smith, B. A.

McKinney High School, McKinney.....
.....E., H. (2½), M., L., P., Ph., P. and H., Civ.
Superintendent, J. H. Hill; Principal, J. W. Williamson, B. A.

Mexia High School, Mexia.....E., H.(3), M., L., C., P., S. G.
Superintendent, E. B. Stover, B. A.; Principal,
S. H. Whitley, B. A.

Mineola High School, Mineola.....
.....E., H. (3), M., L. (4), Gr. (3), S. G., T.
Superintendent, B. A. Stafford, M. A.

Mineral Wells High School, Mineral Wells.....
.....E., H. (3), M., L., P., Ph., T.
Superintendent, E. O. McNew; Principal, Miss Jennie Ritchie.

Name. Extent of Affiliation.

Mulholland School, San Antonio.....E., H., M., L. (4), F. (3).
Principal, Mrs. J. Tom Williams.

Navasota High School, Navasota.....
.....E., H. (2½), M., L., P., C., G., S. G.
Superintendent, W. B. Bizzell, B. S.; Principal, C. M. Porter.

Palestine High School, Palestine.....E., H., M., L., G. (3), P., Ph.
Superintendent, Walker King; Principal, R. C. T. Jacobs.

Paris High School, Paris.....E., H., M., L., G., S.
Superintendent, J. G. Wooten.

Port Arthur High School, Port Arthur.....
.....E., H. (2½), M., P., B., L., Civ.
Superintendent, M. R. Nelson; Principal, Alvin Dille.

San Angelo High School, San Angelo.....
.....E., H. (3), M., L., P., C., S. G.
Superintendent, F. E. Smith, M. S.; Principal,
L. H. Hubbard, B. Lit.

San Antonio Academy, San Antonio.....
.....E., H. (2½), M., L., G., S. G., T., Civ., P.
Principal, W. W. Bondurant, M. A.

San Antonio High School, San Antonio.....E., H. (2½), M.,
L., Gr., G. (3), S. (3), F., B., P., Ph., C., Civ., M. T., T., S. G.
Superintendent, Charles J. Lukin; Principal, W. D. Williams, B. S.

Sweetwater High School, Sweetwater.....E., H., M., L., S., P., Ph.
Superintendent, M. B. Johnson; Principal, W. A. Payne, B. S.

Taylor High School, Taylor.....E., H., M., L., P., Ph., M. T., Civ.
Superintendent, John F. O'Shea; Principal, J. D. Hughlett, B. A.

Temple High School, Temple.....
.....E., H. (2½), M., L., G. (3), C., P., Ph., Civ., S. G., T.
Superintendent J. F. Kimball, M. A.; Principal,
W. W. Clement, B. A.

The Terrill School, Dallas.....E., H., M., L., F., G., P., C., S. G., T.
Principal, M. B. Terrill, M. A.

Thomas Arnold High School, Salado.....
.....E., H. (2½), M., L., Gr., P., P. and H., S. G., Civ.
Principal, S. J. Jones, Ph. D.

Tyler High School, Tyler....E., H. (3), M., L., P., C., Ph., S. G., T.
Superintendent, W. T. Adams; Principal, A. W. Birdwell.

University Preparatory School, Austin....E., H. (3), M., L., G., F.
Principal, Miss Lillian Carrington, B. Lit.

Uvalde High School, Uvalde.....E., H., M., L., S. (3), P., S. G.
Superintendent, A. W. Evans, B. A.; Principal, O. A. Gardner.

Victoria High School, Victoria.....E., H. (3), M., L., B., C., Ph.
Superintendent, A. B. Cox, B. A.

Waco High School, Waco.....
.....E., H. (2½), M., L., C., P., Ph., P. and H., S. G., Civ.
Superintendent, J. C. Lattimore, C. E., M. S.; Principal,
E. T. Genheimer, Ph. B.

Waxahachie High School, Waxahachie.....
.....E., H., M., L., C., P., Ph., Civ., S. G.
Superintendent, Walter Acker, B. A.; Principal,
E. D. Criddle, B. A.

Weatherford High School, Weatherford.....
....E., H. (2½), M., L., G., P., Civ.
Superintendent, T. W. Stanley; Principal, W. O. Dewees.

Weatherford Training School, Weatherford.....
.....E., H., L., Gr., Civ., S. G.
Principal, W. T. Roland, M. A.

Whitis School, Austin.....E., H. (3), M., L., G., F., S., Ph., S. G.
Principal, Miss Mary Whitis.

Wichita Falls High School, Wichita Falls.....
.....E., H. (3), M., L., P., C., Ph.
Superintendent, T. L. Toland, B. Lit., B. A.; Principal,
H. A. Fairchild, B. S.

GROUP II.

Abbott High School, San Angelo.....E., H., M., L.
Principal, Mrs. Jessie Montgomery Abbott.

Abilene High School, Abilene.....E., H., M., L., P.
Superintendent, W. J. Clay; Principal, J. F. Kemp, B. A.

Amarillo High School, Amarillo.....E., H., L., M., S.
Superintendent, C. C. Foster, B. A.; Principal, S. E. Fish, B. S.

Ballinger High School, Ballinger.....E., H., M., L., P., S. G., Civ.
Superintendent, S. M. Byrd, Ph. B.

Bastrop High School, Bastrop.....E., H., M., L.
Superintendent, W. P. Arnold, Ph. D.

Name. Extent of Affiliation.

Belton Academy, Belton.....E., H., M., L.
Principal, C. H. Wedemeyer, M. A.

Big Springs High School, Big Springs.....
.....E., H. (2½), M., L., Civ., S. G., Ph.
Superintendent, A. D. Ellis, B. Lit.; Principal, C. E. Thomas.

Brady High School, Brady.....E., H. (3), M., L.
Superintendent, M. L. Stallings; Principal, W. B. Gibson.

Brownwood High School, Brownwood....E., H., M., L., P., Ph., Civ.
Superintendent, George H. Carpenter, Ph. B.; Principal,
Thomas H. Hart, B. A.

Bryan High School, Bryan.....E., H., M., L.
Superintendent, W. C. Lawson, B. A.; Principal,
A. W. Kinnard, B. A.

Burnet High School, Burnet.....E., H. (2½), M., L., Civ.
Superintendent, M. B. Brown, B. Lit.

Colorado High School, Colorado.....E., H., M., L., P.
Superintendent, C. L. McDonald, Ph. B.; Principal,
Frank H. Newlee, B. A.

Comanche High School, Comanche....E., H., M., L., Civ., P. and H.
Superintendent, D. P. Parker, M. A.; Principal,
M. K. Witt, B. S.

Crockett High School, Crockett.....E., H. (2½), M., L., Civ.
Superintendent, R. R. Sebring.

Dublin High School, Dublin.....E., H., M., L.
Superintendent, J. W. Dunlap; Principal, J. H. Head.

Garland High School, Garland.....E., H., M., L., P.
Superintendent, Thomas W. Platt.

Giddings High School, Giddings.....E., H., M., G. (3).
Superintendent, T. P. Walker.

Gonzales High School, Gonzales.....E., H., M., L., P., Ph., Civ.
Superintendent, Miss Rozelle Nicholson, B. A.; Principal,
J. E. Nelson.

Henderson High School, Henderson....E., H., M., P., C., S. G., T., Civ.
Superintendent, P. B. Bittle, B. S.

Honey Grove High School, Honey Grove.....E., H., M., L., P., S. G.
Superintendent, P. E. McDonald, B. A.; Principal,
S. W. Dirickson, B. S.

Name. Extent of Affiliation.

Hubbard High School, Hubbard.....E., H. (2½), M., L., P., Civ.
Superintendent, T. H. Shelby, B. A.; Principal,
F. H. Newton, B. A.

Kaufman High School, Kaufman.....E., H., M., L., M. T., Civ.
Superintendent, O. P. Norman.

La Grange High School, La Grange.....E., H., M., G. (3), P.
Superintendent, W. J. Kirk.

Longview High School, Longview.....E., H., M., L.
Superintendent, S. J. Blocker, C. E., M. A.; Principal,
B. F. Williams.

Luling High School, Luling.....E., H., M., L.
Superintendent, Miss Minnie Lee Barrett.

Marshall Training School, San Antonio.....E., H., M., L., Gr.
Principal, N. J. Marshall, B. A.

McGregor High School, McGregor.....E., H., M., L.
Superintendent, John W. Kinsey, B. A.

McIlhaney Academy, Stephenville.....E., H., M., L.
Principal, H. J. McIlhaney, B. A.

Nacogdoches High School, Nacogdoches.....E., H., M., L.
Superintendent, R. F. Davis; Principal, John E. Rosser, Ph. B.

North Fort Worth High School, North Fort Worth.....
.....E., H., M., P., C., Civ., S. G.
Superintendent, M. H. Moore.

Orange High School, Orange.....E., H., M., L.
Superintendent, Sumner B. Foster, M. A.; Principal,
M. P. Rogers, B. S.

Pilot Point High School, Pilot Point.....E., H., M., L., P., B.
Superintendent, A. B. Weisner, B. A.; Principal,
Miss Fannie Buster, B. A.

Plano High School, Plano.....E., H. (2½), M., L., P. and H., Civ.
Superintendent, C. F. Walker, B. S.; Principal, S. M. Lloyd, B. A.

Quanah High School, Quanah.....E., H., M., L., Civ., S. G.
Superintendent, Charles G. Green; Principal, H. Y. May.

Saint Mary's Academy, Austin.....E., H., M., G. (3), S. G.
Superintendent, Sister M. Cicily.

Saint Matthew's School for Boys, Dallas....E., H. (2½), M., L., Civ.
Principal, A. G. Blacklock, M. A.

Name. Extent of Affiliation.

Seguin High School, Seguin.....E., H., M., G. (3).
Superintendent, R. E. L. Adams.

Sherman High School, Sherman.....E., H., M., L., B.
Superintendent, J. C. Pyle, B. Lit.; Principal, J. H. Burnett, B. A.

Sulphur Springs High School, Sulphur Springs.....
.....E., H. (2½), M., L., C., S. G.
Superintendent, F. V. Garrison, B. S.

Terrell High School, Terrell.....E., H., M., L., P., S. G., Civ.
Superintendent, S. M. N. Marrs, B. S.; Principal,
J. S. Bagwell, B. A.

Texas Female Academy, Weatherford.....E., H., M., L., G., Civ.
President, Rev. George M. Oakley, B. D.

Texarkana High School, Texarkana.....E., H., M., L.
Superintendent, E. E. Bramlette, M. A.; Principal,
R. P. Bowen, B. A.

Van Alstyne High School, Van Alstyne.....E., H., M., L.
Superintendent, W. F. Barnett; Principal, J. R. Golden.

Vernon High School, Vernon.....E., H., M., L., Civ., T.
Superintendent, B. F. Holcomb.

Wolfe City High School, Wolfe City..E., H. (2½), M., L., Civ., S. G.
Superintendent, E. F. King.

GROUP III.

Carlisle Military Academy, Arlington.....E., H., M.
Principal, J. M. Carlisle, M. A., LL. D.

Center High School, Center.....E., H. (3), M., T., S. G., Civ.
Superintendent, A. E. Day.

Clarksville High School, Clarksville.....E., H., M.
Superintendent, W. J. Gayden.

Douglas-Schuler School, Waco.....E., H., M.
Principals, S. A. Douglas, B. A., J. M. Ferguson.

Elgin High School, Elgin.....E., H., M.
Superintendent, Buckner Harris.

Gatesville High School, Gatesville.....E., H., M.
Superintendent, H. B. Whaling; Principal, J. M. Patton.

Henrietta High School, Henrietta....E., H. (2½), M., P., S. G., Civ.
Superintendent, J. L. Gragg; Principal, Miss Alice Mason.

Name.	Extent of Affiliation.
Institute for the Blind, Austin	E., H., M.
Superintendent, F. M. Bralley.	
Italy High School, Italy	E., H., M.
Superintendent, G. T. Bludworth, B. S.	
Itasca High School, Itasca	E., H., M., P.
Superintendent, C. P. Hudson, B. S.	
Kelley School, Austin	E., H., M.
Principal, Miss M. E. Kelley.	
Ladonia High School, Ladonia	E., H., M.
Superintendent, R. M. Parker, B. S.	
Lampasas High School, Lampasas	E., H. (3), M., P.
Superintendent, G. D. Scott; Principal, L. C. Proctor, M. A.	
Laredo High School, Laredo	E., H., M., S.
Superintendent, L. J. Christen.	
Llano High School, Llano	E., H., M.
Superintendent, J. G. Toland, B. S.	
Midland High School, Midland	E., H., M.
Superintendent, W. W. Lackey.	
Rockdale High School, Rockdale	E., H., M., P., Civ., S. G.
Superintendent, John W. Clark.	
Rock Springs High School, Rock Springs	E., H., M.
Superintendent, J. H. Kile, B. A.	
Runge High School, Runge	E., H., M.
Superintendent, R. A. Wilkins; Principal, R. A. Robertson.	
San Marcos High School, San Marcos	E., H., M.
Superintendent, G. M. Sims, B. S.	
San Saba High School, San Saba	E., H., M.
Superintendent, W. H. Emert, M. A.	
Seymour High School, Seymour	E., H., M.
Superintendent, B. E. Satterfield, B. A.; Principal, G. O. Ferguson, B. A.	
Smithville High School, Smithville	E., H., M., Ph.
Superintendent, J. N. Bigbee, B. A.; Principal, J. K. Barry, B. S.	
State Orphan Home, Corsicana	E., H., M.
Principal, R. E. Seagler.	
Timpson High School, Timpson	E., H. (3), M., S. G., T.
Superintendent, J. B. Ramsey.	

Name.	Extent of Affiliation.
Tivy High School, Kerrville	E., H., M.
Superintendent, H. W. Morelock, B. A.	
Troup High School, Troup	E., H., M., S. G., T.
Superintendent, M. M. Dupre, B. S., C. E.	
West Texas Military Academy, San Antonio	E., H., M., S. G., T.
Principal, Angus McD. Crawford, M. A.	
Yoakum High School, Yoakum	E., H., M., P.
Superintendent, C. A. Peterson, B. S.	

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